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# Aastra CNX Conference Network Switch System Administrator Guide



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# Warranty, regulatory, safety, and copyright / licensing notices

# Warranty - Aastra Telecom, Inc.

Aastra Telecom Inc. ("Aastra") warrants ("Warranty") to its customer that: (i) Aastra has good and marketable title to the Product at the time of delivery to its customer, free and clear of any and all security interests, liens, claims, charges or encumbrances; and (ii) the Product shall be free from defects in design, material and workmanship and shall perform in accordance with the Aastra specifications in all material respects when used for the intended purpose for a period of twelve (12) months from the date of purchase of the Product by such customer from Aastra ("Warranty Period"). This Warranty specifically excludes any representation, warranty, condition or other term relating to any software contained in the Product. At its sole option, Aastra shall either repair or replace defective Product returned during the Warranty Period. Any repaired or replacement Product shall subsequently be covered for the balance of the original Warranty Period or ninety (90) days, whichever is longer. Upon customer's specific request, Product that fails after the Warranty Period expires may be returned for repair at the then current rates, with the cost of such repairs and shipping to be borne by customer.

Customer shall obtain a "returned material authorization" ("RMA") number from Aastra and comply with shipping instructions for all defective Products being returned to Aastra. Defective Products shall be returned to Aastra at the customer's sole expense. Aastra shall repair or replace defective Products returned under Warranty at no charge to customer, and Aastra shall bear the expense of the return shipment of the repaired or replacement Product to customer.

Aastra does not warrant the Product to be compatible with the equipment of any particular telephone company, or their network. This Warranty does not extend to Products damaged by improper installation or operation, alteration, accident, neglect abuse, misuse, fire or natural causes such as storms or floods. Aastra reserves the right to use refurbished parts in the repair or replacement of defective Products. Unauthorized modification or repair will void the Warranty.

To exercise the Aastra CNX Warranty.:

- 1. First contact your reseller for instructions.
- 2. Alternatively, you can contact Aastra Telecom at 1-866-599-7399.

# **Warranty Limitation**

THE FOREGOING PRODUCT WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES AS TO THE CONDITION, OPERATION AND PERFORMANCE OF THE PRODUCT, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES AND/OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. AASTRA'S SOLE AND EXCLUSIVE LIABILITY, AND CUSTOMER'S SOLE AND EXCLUSIVE REMEDY, FOR ANY AASTRA BREACH OF WARANTIES HEREUNDER SHALL BE AASTRA'S OBLIGATION TO REPAIR OR REPLACE THE PRODUCT, AS SET FORTH IN THIS SECTION, AND AASTRA SHALL NOT BE LIABLE FOR ANY DAMAGES WHATSOVER, INCLUDING BUT NOT LIMITED TO DIRECT, INDIRECT, INCIDENTIAL OR CONSEQUENTIAL DAMAGES OF ANY KIND OR NATURE, OR OTHER LOSS, DAMAGE OR EXPENSE DIRECTLY OR INDIRECTLY ARISING FROM CUSTOMER'S USE OF OR INABILITY TO USE PRODUCT, EITHER SEPARATELY OR IN COMBINATION WITH OTHER EQUIPMENT.

# **Regulatory information**

# U.S.A. requirements

The AASTRA CNX has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the Federal Communications Commission (FCC) rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users will be required to take whatever measures may be necessary to correct the interference at their own expense.

Do not attempt to repair or modify this equipment. All repairs must be performed by Aastra Telecom, or an authorized Aastra Telecom representative.

#### FCC Part 68 general information

The AASTRA CNX complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the bottom of this equipment is a label that contains, among other information, a product identifier in the format US:2L4DDNANAASTRA01. If requested, this number must be provided to the telephone company. This Aastra CNX uses the following USOC RJ-48 jacks:

Interface	Service Code	Facility Code
1.544 Mb/s superframe format (SF) without line power	6.0Y	04DU9-BN
1.544 Mb/s superframe format (SF) and B8ZS without line power	6.0Y	04DU9-DN
1.544 Mb/s ANSI extended superframe format (ESF) without line power	6.0Y	04DU9-1KN
1.544 Mb/s ANSI extended superframe format (ESF) and B8ZS without line power	6.0Y	04DU9-1SN

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

If the AASTRA CNX causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facility, equipment, operations or procedures that could affect the operation of the AASTRA CNX. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If you experience trouble with this equipment, please contact Aastra Telecom for repair and warranty information. If there is a problem with the network, the telephone company may request that you remove the equipment from the network until the problem is resolved.

Aastra Telecom recommends that you install an AC surge protector in the AC outlet to which the equipment is connected. This helps to prevent damage to the equipment caused by local lightning strikes or other electrical surges.

#### THE AASTRA CNX HAS NO USER SERVICEBLE PARTS.

#### FCC and telephone company procedures and requirements

In order to connect this equipment to the network, you must provide the local telephone company with the registration number of this equipment, and you must order the proper connections.

To order the proper service, provide the telephone company with the following information:

- Number of required jacks and their USOC numbers
- Sequence in which the trunks are to be connected
- Facility interface codes, by position

#### CSA certification - U.S. and Canada

This equipment has been certified by CSA for use in the U.S. and Canada to the requirements of UL 1950. Third Edition - Safety of Information Technology Equipment. Including Electrical Business equipment and Canadian Standards Association CAN/CSA C22.2 No. 950-95 Third Edition.

# Canadian requirements

#### Canadian Department of Communications Radio Interference Regulations

This digital apparatus (Aastra CNX) does not exceed the Class A limits for radio-noise emissions from digital apparatus, as documented in the Radio Interference Regulations of the Canadian Department of Communications.

#### Règlement sur le brouillage radioélectrique du ministère des Communications

Cet appareil numérique (Aastra CNX) respecte les limites de bruits radioélectriques visant les appareils numériques de classe A prescrites dans le Règlement sur le brouillage radioélectrique du ministère des Communications du Canada.

#### Canada CS-03 rules and regulations

**NOTICE**: This equipment meets the applicable Industry Canada Terminal Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment."

**NOTE:** The Canadian Department of Communications label identifies certified equipment. The certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, ensure that it is permissible to connect to the facilities of the local telecommunications company. You must install this equipment using an acceptable connection method.

Repairs to certified equipment should be made by a supplier-designated representative. If you make repairs or alterations to this equipment, or if the equipment malfunctions, the telecommunications company may request that you disconnect the equipment.

You should ensure, for your own protection, that the electrical ground connections for the power utility, telephone lines, and internal water-pipe system, if present, are connected. This precaution may be particularly important in rural areas

**CAUTION:** You should not attempt to make such connections. You should contact the appropriate inspection authority or electrician.

#### Canada CS-03 Règles et règlements

« AVIS : Le présent matériel est conforme aux spécifications techniques d'Industrie Canada applicables au matériel terminal. Cette conformité est confirmée par le numéro d'enregistrement. Le sigle IC, placé devant le numéro d'enregistrement, signifie que l'enregistrement s'est effectué conformément à une déclaration de conformité et indique que les spécifications techniques d'Industrie Canada ont été respectées. Il n'implique pas qu'Industrie Canada a approuvé le matériel. »

**NOTE:** L'étiquette du ministère des Communications du Canada indique que l'appareillage est certifié, c'est-à-dire qu'il respecte certaines exigences de sécurité et de fonctionnement visant les réseaux de télécommunications. Le ministère ne garantit pas que l'appareillage fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer l'appareillage, s'assurer qu'il peut être branché aux installations du service de télécommunications local. L'appareillage doit aussi être raccordé selon des méthodes acceptées.

Les réparations de l'appareillage certifié devraient être confiées à un service désigné par le fournisseur. En cas de réparation ou de modification effectuées par l'utilisateur ou de mauvais fonctionnement de l'appareillage, le service de télécommunications peut demander le débranchement de l'appareillage.

Pour leur propre sécurité, les utilisateurs devraient s'assurer que les mises à la terre des lignes de distribution d'électricité, des lignes téléphoniques et de la tuyauterie métallique interne sont raccordées ensemble. Cette mesure de sécurité est particulièrement importante en milieu rural.

**ATTENTION:** Les utilisateurs ne doivent pas procéder à ces raccordements, mais doivent plutôt faire appel aux pouvoirs de réglementation en cause ou à un électricien, selon le cas.

# **European requirements**



#### EMI/EN 55 022 statement

This certifies that the Aastra CNX Asterisk Network Switch is shielded against the generation of radio interference in accordance with the application of Council Directive 89/336/EEC. Conformity is declared by the application of EN 55 022:1998 and EN 55 024:1998.

**WARNING:** This is a Class A product. In a residential area, this product may cause radio interference, in which case the user may be required to take the appropriate measures.

#### EC declaration of conformity

This product conforms to the provisions of Council Directive's EMC Directive (89/336/EEC), Low Voltage Directive (73/23/EEC), and R+TTE Directive (1999/5/EC).

# Safety warnings

# **General warnings**

The following safety warnings apply:

- Mechanical hazards and electrical shock hazards are possible if you remove one or more of the modules. There
  are no operator-serviceable modules. Only qualified personnel should service this equipment.
- This equipment must be connected to a protective ground according to the instructions in this manual. Improper
  grounding may result in electrical shock.
- This equipment does not provide safety isolation between any port that is connected to a digital network termination point or any port to which terminal equipment is connected.
- The wall circuit breaker provides the main protection for this equipment.
- Ensure that rack installation does not result in airflow blockage to power supply vents or chassis vents.
- Before installing the Aastra CNX rackmount version, ensure that the rack is sturdy and well-secured.

# Lithium battery caution

**CAUTION:** Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

**ATTENTION:** Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

# **Compliances**

The Aastra CNX is in compliance with regulations as follows:

- Environmental
- 32-104° F (0-40° C)
- Humidity 10-85% non-condensing
- 400 BTUs/hour
- 28 dBA maximum acoustic noise
- Safety Certifications
- cUL 950, NTRL/UL 1950, TUV EN 60 950
- Telecom Approvals
- FCC Part 68, Industry Canada, CTR4
- EMI/RF
- FCC Part 15 Class A, EN55022 Class A (CISPR), EN55024

# Software licensing and copyright

The Aastra CNX product consists of an Aastra designed hardware platform distributed with embedded Linux operating system and application software. This embedded software consists of multiple Aastra and third party programs; each individual program may be subject to one or more Copyrights or Software Licenses; the overall aggregation and distribution of these separate programs is protected as a collective work, Copyright © Aastra Telecom Inc. 2005.

Use and distribution of the CNX product are deemed to be acceptance of the Software Licensing terms contained within the *Aastra CNX Service Level Agreement*. Associated third party license agreements and applicable Open Source software licenses are incorporated by reference; the full text of all licenses can be found on the Aastra CNX documentation CDROM.

The following is a list of Aastra CNX software licenses. See the Aastra CNX documentation CD for more information about these licenses.

- Aastra SLA 1.5
- Copying GPLv2
- Netfilter-licensing
- · Asterisk credits
- LINUX note
- Apachev11
- APLv11
- OpenORB
- EXOLAB
- MPLv1
- MPLv11
- OpenH323

- PWLIB
- PCMCIA CS
- BSD
- Syslogd Klogd
- Copying.LIB LGPL 2v1
- GLIBC
  - Sendmail
- WU-ftpd
- Xinetd
- Ntpd
- OpenSSL
- BerkleyDB
- LFS bootscripts

# Introduction

# Congratulations!!

You have purchased a highly functional, cost-effective, easy-to-use Aastra CNX Conference Network Switch for use in your network.

The Aastra CNX is easy to install and operate, and provides a comprehensive set of security features you would expect from a state-of-the-art call conferencing product.

# What is in the Aastra CNX shipping package?

The Aastra CNX is carefully and securely packaged within the shipping container. Upon opening the shipping package, inventory the contents to be sure there are no missing or damaged parts. The following parts are included:

- One Aastra CNX unit
- One Power cable (for connection to AC power source)
- One DB-9 to DB-9 console cable
- One CompactFlash memory card that contains the software required to operate the unit (for use in CompactFlash memory slot 1)
- One set of rack mounting brackets with six Phillips head screws
- One Aastra CNX Technical Documentation CD ROM
- One CD ROM envelope with License Key label

For a list of additional parts that you need to install the Aastra CNX (which are not included in the shipping package), see Chapter 1, "Aastra CNX Installation and Setup Procedures."



# Chapter 1 Aastra CNX Installation and Setup Procedures

# Introduction

This section provides quick installation and setup procedures for installing and starting up the Aastra CNX Conference Network Switch. This section also provides a list of additional parts that you need to install the Aastra CNX.

#### References

For more information about the Aastra CNX, see Chapter 2, "About the Aastra CNX."

For information about configuring and using the Aastra CNX, see the following chapters in this guide:

Chapter 3, "Configuring the Aastra CNX"

Chapter 4, "Managing the Aastra CNX"

Chapter 5, "Maintaining the Aastra CNX"



# Prepare for hardware installation

# What you need for a single installation

- One Aastra CNX unit.
- One AC power cable
- One CompactFlash memory card
- One set of rack mounting brackets with six (6) Phillips head screws
- Truss head screws (*not provided*)
- One to four RJ-48C T1/E1 cable(s) (not provided)



**Note:** T1/E1 Ports 1, 2, 3, and 4 are available for the 30, 60, and 120 port units.

- One 9-pin male DB-9 to female DB-9, RS-232 serial cable
- One or two RJ-45 10/100BaseT Ethernet cable(s) (not provided)
- (Optional) One 9-pin male DB-9 to female DB-25, RS-232 serial cable for modem connections (not provided)

# Tools required for rackmount installations

In addition to the parts listed above, the following tools are also required when installing an Aastra CNX rackmount unit:

- #2 Phillips screwdriver
- Torque wrench
- Nutdriver set.

# Check the shipping contents

Upon opening the shipping package, inventory the contents to be sure there are no missing or damaged parts, as described in the Introduction section of this guide.

# **Determine location of Aastra CNX (desktop or rackmount)**

#### **Procedure**

To determine the location of your Aastra CNX:

Step	Action
а	If you are installing the Aastra CNX as a desktop unit, place it on a flat surface in close proximity to your PC, skip Step 2, and perform Steps 3 through 8.
b	If you are installing the Aastra CNX as a rackmount unit, proceed to Step 2.



# Install the Aastra CNX in a rack



**Warning:** Before you install the Aastra CNX unit in a rack, ensure that the rack is sturdy and well secured.

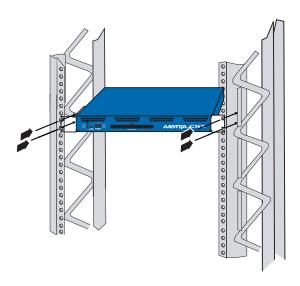


**Caution:** The operating environment must provide unobstructed front-to-back airflow to the chassis that is mounted in a rack.

# **Procedure**

To install the Aastra CNX in a rack:

Step	Action
а	Mount the rackmount brackets to the Aastra CNX unit in a flush-mount position using the 6 Phillips head screws.
b	Align the bracket holes to the rack and insert truss-head screws (not provided).
С	Tighten the screws to 15 in-lb (.69 Nm).





# Connect to the console

# **Console port parameters**

You can access the Aastra CNX console locally or remotely. Ensure that you configure your terminal or PC (terminal emulator) console port parameters as provided in the following table.

Parameter	Value
Baud rate	9600
Flow control	None
Data bits	8
Stop bit	1
Parity	None

For the procedures in this section, refer to the illustration on page 1-6.

# Local connection

#### **Procedure**

To connect a local PC or terminal:

Step	Action
а	Attach the 9-pin male DB-9 connector on the serial cable to the female console port on the rear panel of the Aastra CNX.
b	Attach the 9-pin female connector on the serial cable to the male console port on the back of your PC or terminal.

# Remote connection

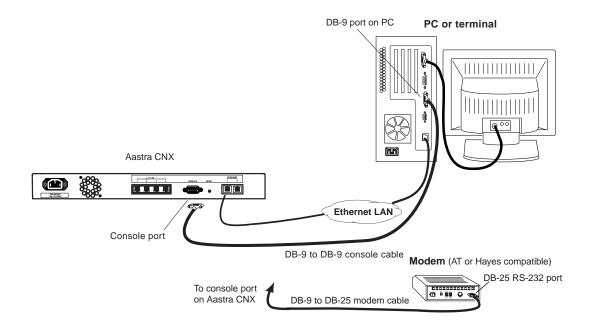
#### **Procedures**

To connect a remote PC and an Aastra CNX to an Ethernet LAN:

Step	Action
а	Attach one end of an Ethernet cable to the Ethernet port on the PC, and the other end to a LAN port.
b	Attach one end of an Ethernet cable to an Ethernet port on the back panel of the Aastra CNX, and the other end to a LAN port.

#### To connect a modem:

Step	Action
а	Attach the 9-pin male connector on the serial cable to the female console port on the rear panel of the Aastra CNX.
b	Attach a 25-pin male connector on the modem cable to the modem's DB-25 RS-232 port.





# Connect the network cables

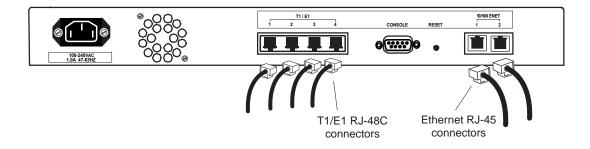
#### **Procedure**



**Note:** Make sure you have the appropriate network cables that you need for your facility. Connect them to the applicable interfaces on the rear of the Aastra CNX as described in the following procedure.

To connect the network cables:

Step	Action
а	Connect RJ-48C T1/E1 cable(s) to the RJ-48C T1/E1 port(s) on the rear panel of the Aastra CNX as shown in the illustration below.
b	Connect the RJ-45 Ethernet UTP cable(s) to the RJ-45 10/100 ENET port(s) on the rear panel of the Aastra CNX as shown in the illustration below.



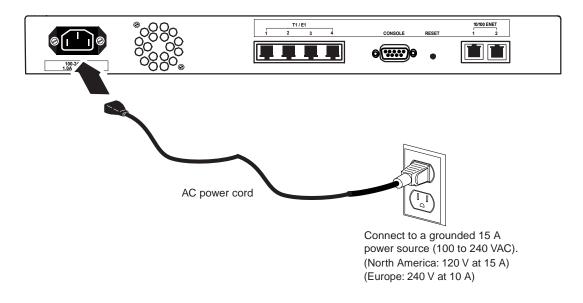


# Connect the power cable

# **Ground the chassis**

To ground the chassis:

Step	Action					
а	ocate the 3-hole, female, power receptacle on the rear of the chassis.					
b	Plug the male, 3-prong connector on the power cable into the power receptacle as shown in the illustration below.					
С	Insert the plug at the other end of the power cable into a grounded power source (100 to 240 VAC).					
	Note: North America: 120 V at 15 A Europe: 240 V at 10 A					





# **Startup and check the Aastra CNX**

# **Apply power to the Aastra CNX**

To start up the Aastra CNX, insert the CompactFlash card into slot 1 of the unit and apply power from the power source.

Powering up a new Aastra CNX:

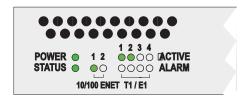
- Starts diagnostic test routines on the Aastra CNX.
- Checks for a flash memory card in CompactFlash slot 1 of the Aastra CNX chassis.
- Initializes the Aastra CNX and, if successful, resets all LEDs to their normal state.
- Starts a one-time software script that allows you to setup your network settings (See Step 7, "Configure the network settings.")

#### **Check the LEDs**

To check the Aastra CNX LEDs:

Step	Action					
а	Check the common LEDs on the front panel. The Power and Status LEDs should be <b>ON</b> (green) indicating the Aastra CNX is ready to take calls.					
b	Check the ENET LEDs on the front panel. If your Aastra CNX has a physical Ethernet link to your network from the 10/100 ENET ports 1 or 2 on the back panel, and no alarms are present, the ENET LEDs 1 and/or 2 should be <b>ON</b> (green).  Note: The ENET LEDs FLASH (green) when there is Rx/Tx activity.					
С	The T1/E1 ports are disabled by default in the Aastra CNX software configuration. The top row of T1/E1 LEDs should be <b>OFF</b> . To enable these ports and check the LEDs, the System Administrator must enable the T1/E1 ports using the Aastra CNX GUI.					

# Illustration



# **Alarm Indicators**

To check alarm indicators on the Aastra CNX:

Step	Action
а	Check that the Status LED is not ON Red. If the Status LED is ON Red, an alarm condition exists in the unit. Contact your System Administrator.  Note: During bootup of the Aastra CNX, the Status LED is ON Red for 1 second. This is a normal condition at bootup.
b	When the T1/E1 port(s) are enabled, check that the T1/E1 LEDs on the bottom row are OFF. If the T1/E1 LED(s) on the bottom row are ON Amber, a yellow alarm is present on the T1/E1 link. If the T1/E1 LEDs are ON Red, a Red alarm is present on the T1/E1 link. Contact your System Administrator.



# **Configure the network settings**

# Requirements

The following is required before you configure the Aastra CNX for the first time:

- The Aastra CNX must physically be connected to your console using an RS-232/DB-9 cable.
- The Aastra CNX must physically be connected to your network interface via the Ethernet port(s).
- The Aastra CNX must be turned on.
- You must be running a terminal emulator on your PC. Terminal emulator must be set as follows:

_	Baud Rate	9600
_	Data	8 bit
_	Parity	None
_	Stop	1 bit
_	Flow Control	None

After powering up the Aastra CNX, a network script runs in a terminal emulator window allowing you to initially configure the unit for your network.

# **Procedure**

The following procedure describes how to configure the network settings.



**Note:** If at any time during the initial configuration process, you want to backout of the configuration, press **<ESC>** to cancel.

# Run network and time configuration

Use the following procedure to initially configure the network settings on the Aastra CNX hardware.

Step	Action							
1	After first-time power up of the CNX, the following displays in a terminal window:							
	Welcome to the Aastra CNX - Conference Bridge Configuration Utility							
	- please press <enter> to continue -</enter>							
2	Press <enter>.</enter>							
	The following displays:							
	Hostname:							
3	Enter the hostname for the Aastra CNX and press <enter>. For example:</enter>							
	Hostname: cnx1 ↓							
	The following displays:							
	Configuring ENET #1 IP Address:							
4	Enter the IP address for the Ethernet port for which you want to use as a management interface, and press <enter>. For example:</enter>							
	IP Address: <b>192.168.2.6</b> ↓							
	The following displays:							
	Netmask:							
5	Enter the Netmask for the Ethernet port for which you want to use as a management interface, and press <enter>. For example:</enter>							
	Netmask: 255.255.25.0 니							
	The following displays:							
	Default Gateway:							

Step	Action							
6	Enter "y" if the network information is correct, and press <enter>.  Enter "n" if the network information is incorrect, and press <enter>.</enter></enter>							
	<b>Note:</b> If you entered "n" at the verification prompt, repeat steps 3 through 7 to correct the network information, and then enter "y" at step 8.							
	The following message and prompt display	The following message and prompt display (after entering "y" at the verification prompt):						
	Configuring Domain Name Service	(DNS)						
	Domain Name:							
7	Enter the Default Gateway for the Ethernet pinterface, and press <enter>. For example:</enter>	Enter the Default Gateway for the Ethernet port for which you want to use as a management interface, and press <enter>. For example:</enter>						
	Default Gateway: <b>192.168.2.1</b> ↓							
	The following displays:							
	Before the following information is configured, please verify the information below is correct before proceeding.							
	Hostname: cnx1 IP Address: 192.168.2.6 Broadcast Address: 192.168.2.255 Netmask: 255.255.255.0							
	Default Gateway: 192.1	68.2.1						
	Is this correct (y/n):							
8		Enter "y" if the network information is correct, and press <enter>. Enter "n" if the network information is incorrect, and press <enter>.</enter></enter>						
	<b>Note:</b> If you entered "n" at the verification prompt, repeat steps 3 through 7 to correct the network information, and then enter "y" at step 8.							
	The following message and prompt display	The following message and prompt display (after entering "y" at the verification prompt):						
	Configuring Domain Name Service	(DNS)						
	Domain Name:	Domain Name:						

Step	Action						
9	Enter the domain name for the Aastra CNX and press <enter>. For example:</enter>						
	Domain Name: aastra.	Domain Name: aastra.com ↓					
	The following prompts displ	ау:					
	Nameserver #1: Nameserver #2:						
10	Enter the IP address of the	Enter the IP address of the DNS servers for the Aastra CNX and press <enter>. For example:</enter>					
	Nameserver #1: 192.167.2.11 ↓ Nameserver #2: 192.168.2.12 ↓						
	The following message and prompts display:						
	Before the following information is configured, please verify the information below is correct before proceeding.						
	Domain Name: aastra.com						
	Nameserver #1: 192.167.2.11 Nameserver #2: 192.168.2.12						
	Is this correct (y/n):						

Step	Action						
11	Enter "y" if the DNS information is correct, and press <enter>. Enter "n" if the DNS information is incorrect, and press <enter>.</enter></enter>						
	Note: If you entered "n" at the verification prompt, repeat steps 9 and 10 to correct the DNS information, and then enter "y" at step 11.  The following message and prompts display (after entering "y" at the verification prompt):						
	Unpacking t	imezones, pl	lease wait o	ne moment			
	Timezone Co	onfiguration					
	Antarctica Arctic Asia Atlantic Australia Brazil CET CST6CDT Canada	EST EST5EDT EGYPT Eire Etc Europe GB GB-Eire	GMT+0 GMT+0 GMT-0 GMT0 Greenwich HST Hongkong Iceland Indian Iran Israel	MST MST7MDT Mexico Mideast NZ NZ-CHAT	PRC PST8PDT Pacific Poland Portugal ROC ROK Singapore Turkey UCT	W-SU WET Zulu	
12			to go up one press <enter>. F</enter>		"cancel" to	cancel:	
	Enter a cho	oice, "back"	to go up one	e level, or	"cancel" to	cancel: <b>EST</b> ↓	
	<b>Note:</b> Some of the options in the Timezone Configuration list display an additional list of options. For example, if you select "America" from the Timezone Configuration list, another list of options displays for timezones in America.						
	The following r	message and pro	ompt displays:				
	Timezone: E	ST					
	Are you sur	re? (y/n)					

Step	Action
13	Enter "y" if the timezone is correct, and press <enter>. Enter "n" if the timezone is incorrect, and press <enter>.</enter></enter>
	<b>Note:</b> If you entered "n" at the verification prompt, repeat step 12 to correct the timezone, and then enter "y" at step 13.
	The following message and prompts display (after entering "y" at the verification prompt):
	Please enter the date and time:
	Four-digit year [2005]: Month [03]: Day [09]:
	Hour [19]: Minutes [40]:
14	The defaults for the date and time are the current date and time on your PC.  If these defaults are correct, press <enter> at each prompt without making an entry.  If a default is incorrect, enter the correct value and press <enter> to continue. In the following example, 14 is entered for the hour since the default of 19 is incorrect.</enter></enter>
	Four-digit year [2005]: Month [03]: Day [09]:
	Hour [19]: <b>14</b> Minutes [40]:
	The following displays:
	Before the following information is configured, please verify the information below is correct before proceeding.
	Date: 2005-03-09 14:40:00
	Is this the correct time $(y/n)$ [n]:

Step	Action
15	Enter "y" if the date and time are correct, and press <enter>.  Enter "n" if the date and time are incorrect, and press <enter>.</enter></enter>
	<b>Note:</b> If you entered "n" at the verification prompt, repeat step 14 to correct the date and time, and then enter "y" at step 15.
	The following message displays (after entering "y" at the verification prompt):
	Configuring Network Time Protocol (NTP)
	You can configure up to 4 NTP servers. To remove an existing server, set it's address to 0.0.0.0. If no valid servers are given then ntp will be disabled.
	Do you want to continue (y/n) [n]:
16	Enter "y" to continue, and press <enter>.</enter>
	The following prompts display:
	NTP Server #1: [pool.ntp.org]: NTP Server #2: [pool.ntp.org]: NTP Server #3: [pool.ntp.org]: NTP Server #4: [pool.ntp.org]:

Step	Action
17	Enter up to four NTP servers in your network, and press <enter>. For example:</enter>
	NTP Server #1: [pool.ntp.org]: 192.167.2.11 ↓ NTP Server #2: [pool.ntp.org]: 192.167.2.12 ↓ NTP Server #3: [pool.ntp.org]: 0.0.0.0 ↓ NTP Server #4: [pool.ntp.org]: 0.0.0.0 ↓
	<ol> <li>Notes:         <ol> <li>You can enter up to four NTP servers. If you have fewer than four NTP servers, enter the IP address(es) for the NTP servers that you have, and then enter 0.0.0.0 for the remaining NTP entries.</li> <li>If you do not have your own NTP server, and the Aastra CNX has Internet connectivity, you may use the default server entry of pool.ntp.org.</li> </ol> </li> <li>Aastra Telecom strongly recommends the use of NTP servers, either your own or the default servers. NTP servers avoid clock slippage and inconsistent conference start times on the Aastra CNX. However, you may completely disable the NTP server feature by setting the IP address of all four servers to 0.0.0.0.</li> </ol>
	The following displays:  Before the following information is configured, please verify the information below is correct before proceeding.
	NTP Server #1 : 192.167.2.11 NTP Server #2 : 192.167.2.12
18	Is this information correct (y/n) [n]:  Enter "y" if the NTP information is correct, and press <enter>.  Enter "n" if the NTP information is incorrect, and press <enter>.</enter></enter>
	<b>Note:</b> If you entered "n" at the verification prompt, repeat step 17 to correct the NTP information, and then enter "y" at step 18.
	The following message displays (after entering "y" at the verification prompt):
	The conference bridge has now been configured, the system will now reboot to reflect the changes.
19	You have successfully initialized the Aastra CNX.
	When you have completed initializing and configuring the Aastra CNX, go to Step 8, "Using the Aastra CNX GUI via the Web" on page 1-19. For more information about logging in, see Chapter 3, "Configuring the Aastra CNX."



# **Using the Aastra CNX GUI via the Web**

## Requirement

**Important:** The JRE allows you to use the Aastra CNX graphical user interface (GUI) to configure, manage, and maintain the Aastra CNX. You must have JRE installed in order to use the Aastra CNX GUI. If your PC (running Windows) is connected to the Internet, the JRE automatically installs (if not already installed) when accessing the Aastra CNX GUI. If you do not have access to an Internet connection OR if you are using the Aastra CNX in a Linux environment, you must acquire the applicable JRE and install it manually before using the Aastra CNX GUI.

## **Procedure**

To begin using the Aastra CNX via the Web interface:

Step	Action
а	Open your web browser and enter the URL or IP address of the Aastra CNX. For example:
	http://cnx1.aastra.com
	http://192.168.112.15
b	Enter the username and password provided by the System Admininstrator.
	Note: Default username and password for System Administrators is "cnxadmin".
С	Enter the Aastra CNX License Key and click APPLY.
	The License Key can be found on the label located on the back of the Documentation CDROM envelope.
	Result: The Aastra CNX reboots.
d	When the reboot is complete, log into the Aastra CNX by repeating steps a. and b.

Step	Action
е	For security purposes, it is advisable to change the default password by clicking the "Change Password" button.
f	Configure the Aastra CNX and/or schedule conferences as required.
	<b>Note:</b> Available tasks are dependent on whether you are a System Administrator or Registered User.



## Notes:

- 1. After port upgrades and major software releases on the Aastra CNX, a System Administrator must enter a new license key to activate the software. For more information about license key activation, see Chapter 5, "Maintaining the Aastra CNX."
- **2.** The Aastra CNX performs an automatic reboot as part of the upgrade process.

## Configuration details (System Administrators only)

For configuration information on the Aastra CNX, see Chapter 3, "Configuring the Aastra CNX."

The CDROM included in the Aastra CNX package provides the Aastra CNX technical documentation in PDF format for your reference as required.

## **Troubleshooting information**

If you are having problems using your Aastra CNX, contact your reseller or Aastra Telecom Technical Support.

# Chapter 2 About the Aastra CNX

# **Overview**

The Aastra Conference Network Switch (CNX) is a high-quality, state-of-the-art, voice-conferencing switch for small and medium enterprise conferencing. It mixes traditional circuit-switched telephone calls (TDM) and packet Voice-over-IP (VoIP) calls within the same conference, initiated from either a channel within Integrated Services Digital Network (ISDN) Primary Rate Interface (PRI) lines, or from its VoIP ports using Session Initiation Protocol (SIP) and/or H.323 signaling.



The Aastra CNX has four T1/E1 ports that allow up to 30 participants and 15 active conferences (30-port unit), and are upgradable to either 60 participants and 30 active conferences (60-port unit), or 120 participants and 60 active conferences. It supports permanent and scheduled (temporary) conferencing, with or without a moderator. Conference booking and invitations are made via the web interface.

The Aastra CNX is easy to install and configure for the network administrator. Managing and maintaining the Aastra CNX can be accomplished using a web browser. Diagnostic features include reporting facilities, such as booking records and activity records, to aid in assisting the administrator in determining the amount of port usage, to aid in resource planning, and to track potential security breaches by unauthorized persons. The Aastra CNX software allows you to export the data to a spreadsheet or database for subsequent analysis.

## Features and benefits

Specific features of the Aastra CNX include:

- High quality voice conferences for up to 30 participants in up to 15 active conferences, upgradable to 60 participants and 30 active conferences, or 120 participants and 60 active conferences.
- Allows for permanent and scheduled conferences
- Allows for email notification of new or modified conferences
- Comprehensive conference controls for host and participants using a simple touch-tone telephony interface
- Allows you to brand the Aastra CNX with customized greetings
- Simple to install, configure, manage, and maintain through an intuitive web interface
- Maintenance features in the web interface include setting date and time, saving and restoring configurations, downloading logs and core files, debugging, and cleaning up unnecessary files from the CompactFlash card.
- Integrates with existing office systems: connects to Private branch exchange (PBX) using ISDN PRI and IP PBXs using SIP or H.323
- Comprehensive security features
  - Web access to Aastra CNX administrative and conference booking portal via Hypertext Transfer Protocol (HTTP)
  - Authentication of users and administrators from an internal database, Microsoft Windows server or Unix/Linux server
  - Auto-generation of separate moderator and participant passcodes
  - Optional restriction of administrative access to an internal IP interface
  - All pertinent booking and usage data, including caller ID, are collected and available for subsequent audit

- Cost-effective conferencing for small to medium-size enterprises
  - Time and travel cost savings
  - Faster product development
  - Availability of decision makers
  - Global presence with low cost
  - Critical information exchange

## Voice processing features

The Aastra CNX offers the following technical features:

- Dedicated digital signal processor (DSP)-based speech processing for up to 64 VoIP channels using the G.729a codec, and 120 channels using G.711 codec, with G.168 echo cancellation, voice activity detection, silence suppression, and comfort noise generation
- Hardware-based audio mixer with automatic gain control, acoustic and electrical echo cancellation, adaptive noise suppression, and dominant speaker selection.
- Touchtone (dual-tone multifrequency (DTMF)) detection, suppression, and generation

## Languages

The following anguage packs are available for the Aastra CNX. Lanaguage packs include announcements and GUI prompts in a specific language.

- English (default)
- British English (available for announcements only)
- French-Canadian
- Spanish

#### Reference

For a procedure on loading language packs, see Chapter 5, "Maintaining the Aastra CNX."

# Aastra CNX hardware

## **Description**

This section provides information about the Aastra CNX chassis, the components shipped with the product, and descriptions of the front and rear panels on the unit.

## Chassis

The Aastra CNX chassis has a width of 12 in. (30.5 cm), a depth of 9 in. (22.9 cm), and weighs approximately 6 lbs. (2.73 kg).

It has an internal fan module for cooling the unit with fresh air circulation vents on the front panel and exhaust vents on the rear panel.

You can install the Aastra CNX chassis on a flat surface (desktop), or you can install it in a Telco or standard EIA 19-inch computer rack.

## Reference

For information about installing the desktop and rackmount versions, and starting up the Aastra CNX for the first time, see the *Aastra CNX Conference Network Switch Installation and Setup Guide*.

## Front panel

The Aastra CNX front panel consists of the following:

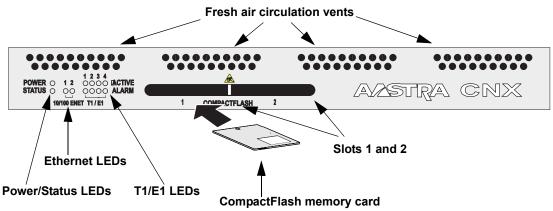
- Status/Power LEDs
- Two (2) Ethernet LEDs
- Four (4) pairs T1/E1 LEDs
- Two (2) CompactFlash memory card slots (slot 1 and slot 2)



**Note:** One (1) CompactFlash memory card is included with the Aastra CNX unit and is shipped installed in slot 1. Aastra CNX supports True IDE mode, and Type I and Type II cards.

The following illustration shows the Aastra CNX front panel.

## **Aastra CNX Front Panel**



The following table describes each of the components on the Aastra CNX front panel.

Front Panel Component	State	Meaning	
Power LED	OFF ON (green)	Power off Power on	
Status LED	DFF ON (green) Power off Ready to take calls ON (red) Alarm condition Normal condition at bootup		
ENET LEDs (1, 2)	OFF ON (green) FLASH (green)	No link present Link present and online: normal operating condition Rx/Tx activity	
<b>T1/E1 LEDs</b> (Pairs 1, 2, 3, 4)	Top LED  OFF ON (green)	No link provisioned or link in alarm status Link present and online with no errors or alarms detected	
ON (amber) Physica		No link provisioned or no alarm Physical link is in yellow alarm state. Physical link is in red alarm state.	
Slot 1/Slot2	Slots to accept a CompactFlash memory card.  Note: One (1) CompactFlash memory card is included with the Aastra CNX unit and is shipped installed in slot 1. Aastra CNX supports True IDE mode, and Type I and Type II cards.		

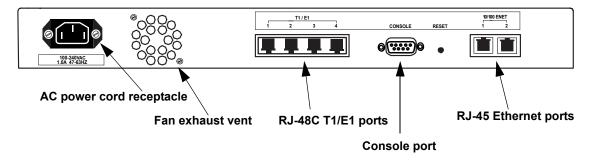
# Rear panel

The Aastra CNX rear panel consists of the following:

- AC power cord receptacle
- Four RJ-48C T1/E1 ports
- One 9-pin female DB-9 serial console port (for RS-232 cable)
- Two RJ-45, 10/100BaseT Ethernet ports

The following illustration shows the Aastra CNX rear panel.

## **Aastra CNX Rear Panel**



# **Aastra CNX software**

## **Description**

This section provides the following software features for the Aastra CNX:

- Protocols and RFCs
- Conference capabilities
- Users and user privileges
- Reporting capabilities
- Aastra CNX upgrades
- Protocols and RFCs

## **Protocols and RFCs**

You can connect the Aastra CNX directly to the Public Switched Telephone Network (PSTN), or to a Private Branch Exchange (PBX). It supports both user and network-side PRI.

The Aastra CNX supports the following protocols:

- ISDN PRI for PBX and PSTN interconnection:
  - American National Standards Institute (ANSI) National ISDN-2 (NI2)
  - European Telecommunications Standards Institute (ETSI) NET5
  - Nortel DMS-100 Custom
  - Lucent 5ESS Custom
- Session Initiation Protocol (SIP) call control
- H.323 call control
- Real-Time Transport Protocol (RTP) for VoIP media streams, with RFC 2833 DTMF detection
- Winbind for integration with Microsoft Windows servers

- Network Information Service (NIS) for integration with Unix and Linux servers
- Simple Mail Transfer Protocol (SMTP) for integration with email systems

When using H.323, the Aastra CNX functions as a terminal appearing as a peer to H.323-based IP phones. You can configure the Aastra CNX to work with one or more H.323 gatekeepers.

When using SIP, the Aastra CNX functions as a SIP user-agent. You can configure the Aastra CNX to work with one or more SIP proxies which may be acting as an IP PBX. The Aastra CNX conforms to the following RFCs:

- RFC 3261, Session Initiation Protocol
- RFC 3262, Reliability of Provisional Responses in the Session Initiation Protocol
- RFC 2327, Session Description Protocol
- RFC 2806, URLs for Telephone Calls

The Aastra CNX receives audio streams for VoIP connections over RTP on top of User Datagram Protocol (UDP), with RTCP providing periodic reports on the reception of the audio stream. The Aastra CNX conforms to the following RTP RFCs:

- RFC 3550, RTP: A Transport Protocol for Real-Time Applications
- RFC 2833, RTP Payload for DTMF Digits, Telephony Tones and Telephony Signals

# **Conference capabilities**

Each Aastra CNX supports 30 conference participants with up to 15 active conferences (60-port unit supports 60 participants with up to 30 active conferences; 120-port unit supports 120 participants with up to 60 active conferences). Participants can connect by TDM, VoIP, or both.

The following table describes the type of Aastra CNX conferences and the features associated with these conference types.

Conference types	Description	Conference type features
Permanent	This type of conference is always available. It uses ports from a pool dedicated for permanent conferences.	
	You can use a permanent moderated bridge as a personal bridge. Participants are put on hold until the moderator joins and are disconnected when the moderator leaves. The first person to join activates the conference in this type of bridge.  Note: Permanent conferences must be setup	Moderated and Unmoderated - A user(s) is designated as a moderator(s). The moderator uses a PIN that provides full control over the conference. You can also enable or disable a moderator as the dominant speaker of the conference.
Scheduled	by a system administrator.  This type of conference exists for a specific	Note: The moderator PIN is different from
3	duration and uses a reserved number of ports for the conference. Scheduled conferences can handle early arrivals and over-runs and do not require moderators.	the conference participant's PIN.
	Scheduled conferences can also have multiple recurrences of a conference.	

## Port resource management

You can configure Aastra CNX switches with a number of ports to be held in reserve for specific conferences. If all non-reserved ports on the Aastra CNX are in use, any attempt to join a conference on that Aastra CNX results in a busy signal. When scheduling conferences, the Aastra CNX does not permit allocation of reserved ports if it prevents existing reservations to be met.

## Users and user privileges

The Aastra CNX supports three types of users with various user privileges:

- System Administrators
- Registered Users
- Conference Participants

The following paragraphs describe the privileges for each type of user.

## **System Administrator**

System administrators have access privileges to all Aastra CNX management features and functions. The following table provides a list of available Aastra CNX functions that a system administrator can perform.

Function	Description		
Configure	<ul> <li>Perform initial configuration using setup script</li> <li>Determine language to be used on Aastra CNX</li> <li>Set number of ports for conference</li> <li>Set external servers (DNS and NTP)</li> <li>Set management interface</li> <li>Configure ISDN PRI attributes</li> <li>Set Windows and/or Network Information System authentication</li> <li>Determine conference passcode length, leeway, and warning time</li> <li>Configure conference VoIP attributes</li> <li>Configure SIP, H.323, and/or RTP</li> <li>Change password after logging in</li> <li>Return Aastra CNX to factory defaults</li> </ul>		

(continued)

Function	Description		
Manage	<ul> <li>Add and delete users and system administrators</li> <li>Modify passwords</li> <li>Create, modify, and delete permanent conferences with or without moderators</li> <li>Create, modify and delete scheduled conferences with or without moderators</li> <li>Set tones and lanaguage announcements</li> <li>Set time zones for conferences</li> <li>Set duration of conferences</li> <li>Set recurrence of conferences</li> </ul>		
Maintain/Troubleshoot	<ul> <li>Perform software updates</li> <li>Load/remove lanaguage packs</li> <li>Load/remove customized greetings</li> <li>Display Aastra CNX operational status and monitor real-time conference activity</li> <li>Load new software License Keys</li> <li>Reboot CNX</li> <li>Save/restore Aastra CNX configuration</li> <li>Set Aastra CNX date/time</li> <li>Download call data and conference data logs for use with report generation applications such as Microsoft Excel or Microsoft Access</li> <li>Delete unwanted files from CompactFlash</li> </ul>		

# **Registered User**

The following table provides a list of available Aastra CNX functions that a registered user can perform.

Function	Description		
Manage own conferences	Create, modify, and delete conferences with or without moderators		

## **Conference participant**

Conference participants have access to a conference via dual-tone multifrequency (DTMF) using a passcode. One or more conference participants can be a moderator which provides additional control over the conference. The following table provides a list of available Aastra CNX functions that a conference participant can perform.

Function	Description
Manage	<ul> <li>Access live conferences when required using a passcode (DTMF code)</li> <li>For live conferences, a conference participant can:</li> </ul>
	<ul> <li>Mute/unmute self</li> </ul>
	<ul> <li>Initiate help sequence (unrecognized DTMF key sequence automatically elicits help)</li> </ul>
	<ul> <li>Listen to roll call</li> </ul>
	<ul> <li>Extend a conference if required (unmoderated conferences only)</li> </ul>
	<ul> <li>Can act as a moderator for the conference which provides additional control. A moderator can additionally perform the following:</li> </ul>
	<ul> <li>Lock/unlock the conference</li> </ul>
	<ul> <li>Mute all other participants and unmute self (lecture mode)</li> </ul>
	<ul> <li>Mute participant</li> </ul>
	<ul><li>Eject participant</li></ul>
	<ul> <li>Assign moderator privileges</li> </ul>
	<ul> <li>Request additional ports</li> </ul>
	<ul> <li>Extend a conference (unmoderated conferences only)</li> </ul>
	<ul> <li>Terminate a conference</li> </ul>
	<b>Note:</b> A conference can have multiple moderators that can pass tasks among themselves.

# Reporting capabilities

The reporting feature on the Aastra CNX provides the following:

- Assists a system administrator in gauging port usage (and abuses), with a view to resource planning.
- Tracks potential security breaches by unauthorized users logging into conferences

The Aastra CNX provides raw data called Call Detail Records (CDRs) that are stored in logs on the CompactFlash. There are two types of CDR logs:

- Call and conference activity CDR logs (cdrlog)
- Conference scheduling CDR logs (confcdrlog)

The Aastra CNX automatically generates the CDR logs in comma-separated value (CSV) format during call activity (ISDN, H.323, and SIP), and during conference activity of an active 24 hour period and when the Aastra CNX starts up.

You can download these CDRs to your PC and use an external application (such as, Microsoft Excel or Microsoft Access), to produce reports. You can use CDR log files for billing purposes and for debugging and troubleshooting the Aastra CNX as required.

### Reference

For a procedure on downloading CDRs, see Chapter 5, "Maintaining the Aastra CNX."

For more information about the contents of the CDRs, see Appendix B, "Additional information about CDR logs."

# **Aastra CNX upgrades**

The Aastra CNX is field upgradable from a 30-port unit to a 60- or 120-port unit. The following table shows the potential number of active participants and conferences for each type of unit.

Aastra CNX	Number of active participants	Number of active conferences	
30-port unit	30	15	
60-port unit	60	30	
120-port unit	120	60	

# Software requirements

The following table provides the minimum software you need to configure and manage conferences on the Aastra CNX.

Software	Minimum requirements
Web browser	Any Web browser running Java 2 Platform V1.5.0 Standard Edition or later
Java Runtime Environment (JRE)	JRE 1.5.0 Standard Edition or later
Note: The JRE allows you to use the Aastra CNX graphical user interface (GUI) to configure, manage, and maintain the Aastra CNX.	
You must have JRE installed in order to use the Aastra CNX GUI.	
If your PC (running Windows) is connected to the Internet, the JRE automatically installs (if not already installed) when accessing the Aastra CNX GUI.	
If you do not have access to an Internet connection OR if you are using the Aastra CNX in a Linux environment, you must acquire the applicable JRE and install it manually before using the Aastra CNX GUI.	

# Chapter 3 Configuring the Aastra CNX

# **Overview**

## **Description**

You perform an initial configuration of the Aastra CNX from the console port. Initial configuration includes setting specific essential parameters, including the unit's network settings. Successful initial configuration allows you to complete the unit's software configuration using a web-based GUI.

## Initial configuration

After installing the Aastra CNX, you must initially configure the unit to operate in your network by specifying its hostname, Ethernet IP address, Netmask, default gateway, NTP servers, and date and time. When you power up the Aastra CNX for the first time, a setup script runs to allow you to initially configure the unit for your network.

### Reference

For more information about the Aastra CNX hardware installation and for a procedure to perform the initial configuration, see the *Aastra CNX Conference Network Switch Installation and Setup Guide*.

## Modifying the initial configuration

After initially configuring the Aastra CNX using the setup script, you can modify the settings using additional options that the script provides.

The following procedures provide additional options you can perform using the setup script:

- (1) Run network and time configuration (See *Aastra CNX Installation and Setup Guide f*or more information on option 1)
- (2) Change Telnet access
- (3) Set date and time
- (4) Configure Network Time Protocol (NTP)
- (5) Force reboot

## (2) Change Telnet access

This option allows you to enable or disable Telnet on the Aastra CNX. Enabling Telnet provides you the ability to Telnet into the Aastra CNX as required. Use the following procedure to change Telnet access on the Aastra CNX.



**Note:** If at any time during the initial configuration process, you want to backout of the configuration, press **<ESC>** to cancel.

Step	Action
1	At the Aastra CNX Main Menu, select option 2, and press <enter>.</enter>
	Welcome to the
	Aastra CNX Conference Network Switch
	Main Menu
	1. Run network and time configuration
	2. Change Telnet access 3. Set date and time
	4. Configure Network Time Protocol (NTP)
	5. Force reboot
	Please select an option: 2,
	The following prompt displays:
	1. Enable
	2. Disable
	[2]:
2	Enter "1" to enable Telnet, or enter "2" to disable Telnet on the Aastra CNX, and press <enter>.</enter>
	1 .1
	The setting is saved and displays the main menu.
3	You have successfully changed Telnet access on the Aastra CNX.

## (3) Set date and time

This option allows you to modify the date and time that you set during the "Run network and time configuration" procedure. Use the following procedure to modify the date and time on the Aastra CNX.



**Note:** If at any time during the initial configuration process, you want to backout of the configuration, press **<ESC>** to cancel.

Step	Action					
	At the Aastra CNX Main Menu, select option 3, and press <enter>.</enter>					
	Welcome to the Aastra CNX - Conference Bridge Configuration Utility					
	<ol> <li>Run network and time configuration</li> <li>Change Telnet access</li> <li>Set date and time</li> <li>Configure Network Time Protocol (NTP)</li> <li>Force reboot</li> </ol>					
	Please sele	ct an optic	on: <b>3</b> ↓			
	The following message and prompts display:					
	Unpacking timezones, please wait one moment  Timezone Configuration					
	Timezone ee	nii iguracioi	1			
	Antarctica Arctic	Cuba EET EST EST5EDT Egypt	HST Hongkong Iceland	Libya MET MST MST7MDT	ROK	W-SU WET

(continued)

Overview

Is this the correct time (y/n) [n]:

## Overview

Step	Action
5	Enter "y" if the date and time are correct, and press <enter>.  Enter "n" if the date and time are incorrect, and press <enter>.</enter></enter>
	<b>Note:</b> If you entered "n" at the verification prompt, repeat step 4 to correct the date and time, and then enter "y" at step 5.
	The setting is saved and displays the main menu.
6	You have successfully modified the date and time on the Aastra CNX.

## (4) Configure Network Time Protocol (NTP)

This option allows you to modify the Network Time Protocol (NTP) that you set during the "Run network and time configuration" procedure. Use the following procedure to modify the NTP on the Aastra CNX.



**Note:** If at any time during the initial configuration process, you want to backout of the configuration, press **<ESC>** to cancel.

Step	Action				
1 At the Aastra CNX Main Menu, select option 4, and press <enter>.</enter>					
	Welcome to the Aastra CNX - Conference Bridge Configuration Utility				
<ol> <li>Run network and time configuration</li> <li>Change Telnet access</li> <li>Set date and time</li> <li>Configure Network Time Protocol (NTP)</li> <li>Force reboot</li> </ol>					
	Please select an option: 4 4				
	The following message and prompts display:				
	Configuring Network Time Protocol (NTP)				
	You can configure up to 4 NTP servers. To remove an existing server, set it's address to 0.0.0.0. If no valid servers are given then ntp will be disabled.				
	Do you want to continue (y/n) [n]:				
2	Enter "y" to continue, and press <enter>.</enter>				
	The following prompts display:				
	NTP Server #1: [pool.ntp.org]: NTP Server #2: [pool.ntp.org]: NTP Server #3: [pool.ntp.org]: NTP Server #4: [pool.ntp.org]:				

(continued)

Step	Action				
3	Enter up to four NTP servers in your network, and press <enter>. For example:</enter>				
	NTP Server #1: [pool.ntp.org]: 192.167.2.11 ↓ NTP Server #2: [pool.ntp.org]: 192.167.2.12 ↓ NTP Server #3: [pool.ntp.org]: 0.0.0.0 ↓ NTP Server #4: [pool.ntp.org]: 0.0.0.0 ↓				
	<ol> <li>Notes:         <ol> <li>1.You can enter up to four NTP servers. If you have less than four NTP servers, enter the IP address(es) for the NTP servers that you have, and then enter 0.0.0.0 for the remain NTP entries.</li> <li>If you do not have your own NTP server, and the Aastra CNX has Internet connectivity, you may use the default server entry of pool.ntp.org.</li> </ol> </li> <li>Aastra Telecom strongly recommends the use of NTP servers, either your own or the default servers. NTP servers avoid clock slippage and inconsistent conference start times on the Aastra CNX. However, you may completely disable the NTP server feature by setting the IP address of all four servers to 0.0.0.0.</li> </ol>				
	The following displays:				
Before the following information is configured, please verify the information below is correct before proceeding.					
	NTP Server #1 : 192.167.2.11 NTP Server #2 : 192.167.2.12				
	Is this information correct (y/n)[n]:				
4	Enter "y" if the NTP information is correct, and press <enter>. Enter "n" if the NTP information is incorrect, and press <enter>.</enter></enter>				
	<b>Note:</b> If you entered "n" at the verification prompt, repeat step 3 to correct the NTP information, and then enter "y" at step 4.				
5	You have successfully modified NTP on the Aastra CNX.				

## (5) Force reboot

This option allows you to manually force a reboot of the Aastra CNX.



**Warning:** Use caution when using the reboot option. If the Aastra CNX is in use and you perform a reboot, all active conferences are aborted.



**Note:** If at any time during the initial configuration process, you want to backout of the configuration, press **<ESC>** to cancel.

Step	Action			
1	At the Aastra CNX Main Menu, select option <b>4</b> , and press <enter>.</enter>			
	Welcome to the Aastra CNX - Conference Bridge Configuration Utility			
	<ol> <li>Run network and time configuration</li> <li>Change Telnet access</li> <li>Set date and time</li> <li>Configure Network Time Protocol (NTP)</li> <li>Force reboot</li> </ol>			
	Please select an option: 4. The following prompt displays:			
	Are you sure you want to reboot the Aastra $CNX$ (y/n)?  Caution: Rebooting the Aastra $CNX$ causes interruption in the services that the unit is providing. Aastra Telecom recommends that only System Administrators reboot the Aastra $CNX$ when required.			
2	Enter "y" if you still want to reboot the Aastra CNX.  Enter "n" if you do not want to reboot the Aastra CNX.  After entering "y" at the prompt, the following displays:  The Aastra CNX is rebooting  Wait for the Aastra CNX to reboot before using the Aastra CNX Configuration Utility or the Aastra			
3	CNX GUI.  You have successfully rebooted the Aastra CNX.			

# Logging in to the Aastra CNX

## **Description**

After initial setup of the Aastra CNX network information via the console port, the Aastra CNX becomes active and ready for you to continue configuration of the software to manage users, conferences, and the unit using the GUI.

## Requirements

- You must have performed the initial network configuration using the procedures in the *Aastra CNX Installation and Setup Guide*, Step 7, "Configure the network settings."
- At first-time login for system administrators, the default user ID is **cnxadmin** (all lowercase) and the default password is **cnxadmin**. For security purposes, you should change your password



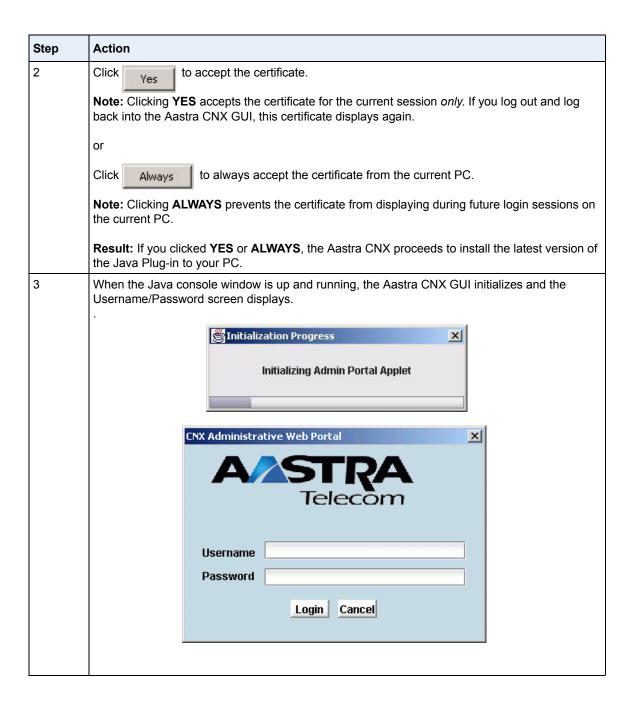
#### Notes:

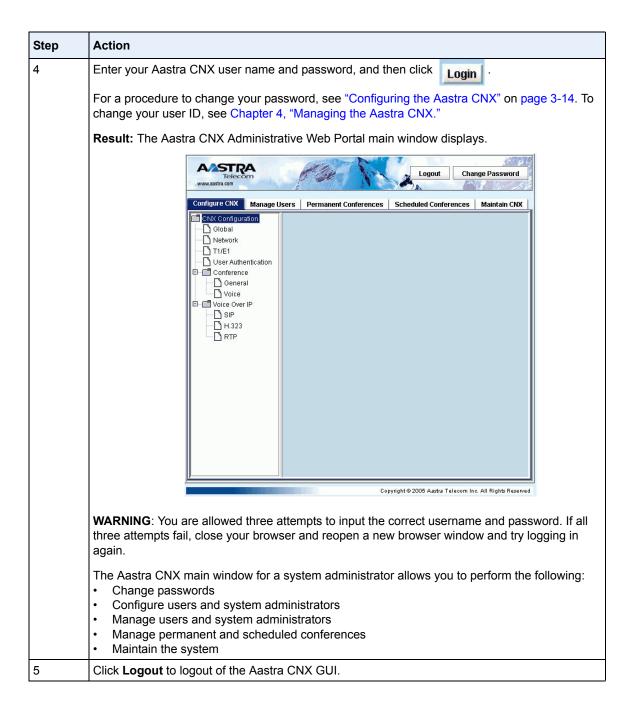
- 1. To change the password after logging in, click on the "Change Password" button in the Aastra CNX window.
- 2. To change the default user ID after logging in, see Chapter 4, "Managing the Aastra CNX."

## **Procedure**

Use the following procedure to log into the Aastra CNX.







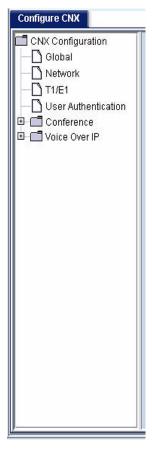
# **Configuring the Aastra CNX**

# **Description**

You configure the Aastra CNX using the GUI provided by the downloaded applet running in a Web browser.

At the Aastra CNX main window, the **Configure CNX** tab displays the configurable objects. Clicking on a configurable object displays a group of attributes and their values that you can configure.

The following figure shows the Aastra CNX configuration tree structure.



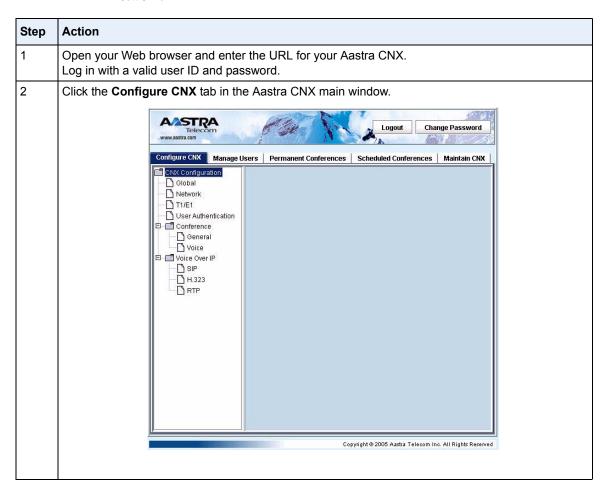
The following parameters may be configured:

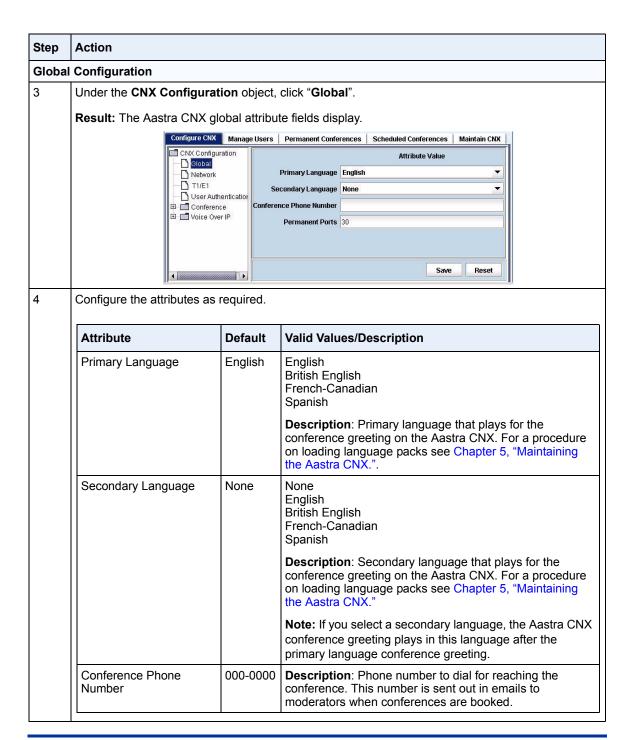
Parameter	What you configure			
Global	<ul> <li>Languages for voice prompts</li> <li>Secondary Language for voice prompts</li> <li>Conference phone number</li> <li>Number of ports to reserve for permanent (reservationless) conferences</li> </ul>			
Network	<ul> <li>IP addresses</li> <li>Netmasks</li> <li>Default gateway address</li> <li>Host name</li> <li>Domain name</li> <li>Domain Name Servers (DNSs)</li> <li>Server information</li> <li>Management Interface</li> <li>File Transfer Protocol (FTP) (enable or disable)</li> <li>Network Time Protocol (NTP) Servers</li> </ul>			
T1/E1	<ul> <li>Framing Types</li> <li>Clocking</li> <li>Switch Types</li> <li>Direction</li> <li>Line Coding</li> <li>Line Framing</li> <li>Loopback</li> <li>Line Buildout</li> <li>CRC (E1 only)</li> <li>Overlap (E1 only)</li> <li>Number of Digits (E1 only)</li> <li>Ports 1 through 4 (enable or disable)</li> </ul>			
User Authentication	Windows Authentication     Network Information Service (NIS) Authentication			
Conference	<ul> <li>Conference passcode lengths</li> <li>Period of time when callers can access a conference before it starts.</li> <li>Warning time period of impending conference ending</li> <li>Voice quality parameters</li> </ul>			
Voice over IP	<ul> <li>Session Initiation Protocol (SIP) service parameters</li> <li>H.323 service parameters</li> <li>Real-Time Transport Protocol (RTP) parameters</li> </ul>			

# **Procedures**

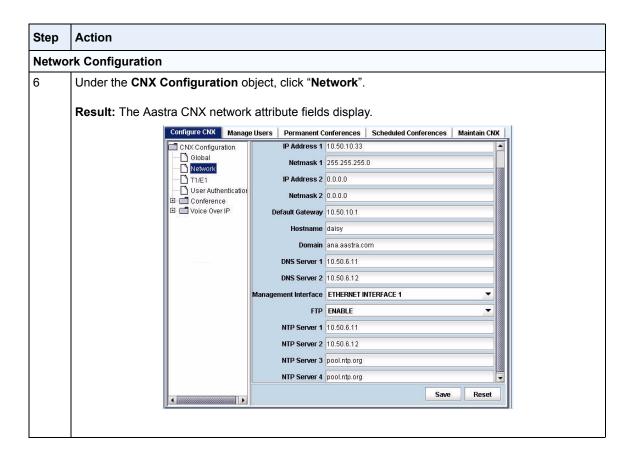
# **General configuration**

Use the following procedure to configure the Aastra CNX to communicate in your network.



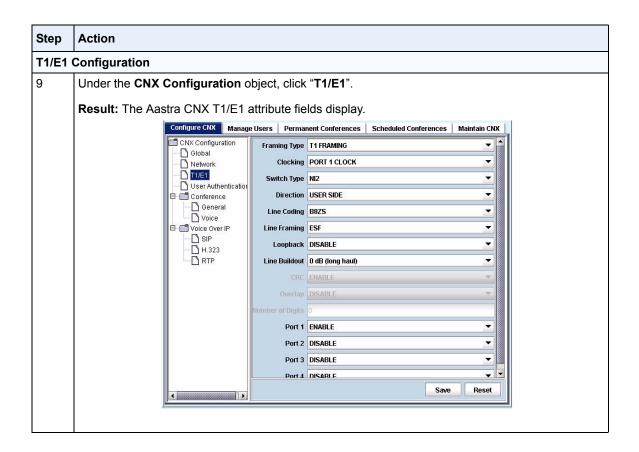


Step	Action					
4 (cont'd)	Global configuration attributes continued					
	Attribute	Default	Valid Values/Description			
	Permanent Ports	0	0 to 120			
	Note: This attribute must be set to an appropriate number of ports before using Permanent conferences.		Note: Values are: 0 to 30 for 30-port unit 0 to 60 for 60-port unit 0 to 120 for 120-port unit  Description: Number of ports reserved for permanent conferences. This value is subject to ports being physically configured on the Aastra CNX, either T1/E1 ports and/or VoIP ports. It is also subject to the licensed number of ports.  Note: Permanent ports are not available for scheduled conferences.  You must provision the T1/E1 ports, SIP service, or H.323			
			service on the Aastra CNX before setting the Permanent Port value. See the following table for applicable settings.			
			Physical Ports Enabled Maximum Permanent Port Value			
			1 T1 23 2 T1s 46 4 T1s 92			
			1 E1 30 2 E1s 60 4 E1s 120			
			SIP or H.323 service enabled 30 60 120			
5	Click Save to save t	he configu	ration to the Aastra CNX and to the CompactFlash card.			



Step	Action	Action				
7	Configure the attributes	as required.				
	Attribute	Default	Valid Values/Description			
	IP Address 1	<current ip<br="">address of the Aastra CNX&gt;</current>	<b>Description</b> : IP address for Ethernet 1, as initially configured from the console.			
	Netmask 1 <current aastra="" addres="" cnx="" netmask="" of="" the=""></current>		<b>Description</b> : Netmask address for Ethernet 1.			
	IP Address 2	0.0.0.0	Description: IP address of a second Ethernet port.			
	Netmask 2	0.0.0.0	<b>Description</b> : Netmask address of a second Ethernet port.			
	Default Gateway	Current default gateway of the Aastra CNX>	<b>Description</b> : Default gateway IP address.			
	Hostname	<current hostname of the Aastra CNX&gt;</current 	<b>Description:</b> Hostname of the Aastra CNX.			
	Domain	Current domain name of the Aastra CNX>	<b>Description:</b> Domain name of the Aastra CNX.			
	DNS Server 1	<current dns<br="">Server 1 address of Aastra CNX&gt;</current>	<b>Description</b> : IP address of DNS server 1.			
	DNS Server 2	<current dns<br="">Server 2 address of Aastra CNX&gt;</current>	<b>Description</b> : IP address of DNS server 2.			
	Management Interface	ETHERNET INTERFACE 1	ETHERNET INTERFACE 1 ETHERNET INTERFACE 2 BOTH			
			<b>Description</b> : Determines which IP network can access the Aastra CNX for managed functions.			
	FTP	ENABLE	ENABLE DISABLE			
			<b>Description</b> :. Specifies whether or not File Transfer Protocol (FTP) is enabled or disabled on the Aastra CNX.			

Step	Action					
7 (cont'd)	Network configuration a	ttributes continued				
	Attribute	Default	Valid Values/Description			
	NTP Server 1	<pre><current 1="" aastra="" address="" cnx="" ntp="" of="" server=""></current></pre>	<b>Description</b> : IP address of NTP server 1.			
	NTP Server 2	<current ntp<br="">Server 2 address of Aastra CNX&gt;</current>	<b>Description</b> : IP address of NTP server 2.			
	<b>Description</b> : IP address of NTP server 3.					
	<b>Description</b> : IP address of NTP server 4.					
	Note: You can enter up to four NTP servers in your network, and press <enter>. For example:</enter>					
	NTP Server #1: [pool.ntp.org]: 192.167.2.11 \( \text{J} \) NTP Server #2: [pool.ntp.org]: 192.167.2.12 \( \text{J} \)					
	NTP Server #2: [pc					
	NTP Server #4: [po					
	You can enter up to four NTP servers. If you have less than four NTP servers, enter the IP address(es) for the NTP servers that you have, and then enter 0.0.0.0 for the remaining NTP entries.  If you do not have your own NTP server, and the Aastra CNX has Internet connectivity, you may us the default server entry of pool.ntp.org.					
Aastra Telecom <b>strongly recommends</b> the use of NTP servers, either your own or the diservers. NTP servers avoid clock slippage and inconsistent conference start times on the CNX. However, you may completely disable the NTP server feature by setting the IP add four servers to 0.0.0.0.						
8	Click Save to sav	ve the configuration	to the Aastra CNX and to the CompactFlash card.			



Step	Action				
10	Configure the attributes as required.				
	Attribute	Default	Valid Values/Description		
	Framing Type	T1 FRAMING	T1 FRAMING E1 FRAMING		
	Clocking	PORT 1 CLOCK	INTERNAL CLOCK PORT 1 CLOCK PORT 2 CLOCK PORT 3CLOCK PORT 3CLOCK PORT 4CLOCK  INTERNAL CLOCK - Uses the internal Aastra CNX clock for synchronization on TDM links.  PORT 1 thru PORT 4 CLOCK - Uses the external clocking on port 1 thru port 4, respectively, for		
	Switch Type	For T1 Framing: DMS 100 For E1 Framing: ETSI	synchronization on TDM links.  For T1 Framing:  DMS 100 5ESS NI2 FXO Loop Start FXO Ground Start FXS Ground Start FXS Ground Start E&M  For E1 Framing: ETSI  Description: Specifies the switch type for the ISDN PRI connection.  Descriptions of T1 Switch Types: DMS 100 - Northern Telecom Inc. DMS-100 5ESS - Lucent 5ESS NI2 - North American National ISDN 2 (NI2)-compliant switch		

	Action					
l)	T1/E1 attributes continued.					
	Attribute	Default	Valid Values/Description			
	Switch Type (continued)	For T1 Framing: DMS 100 For E1 Framing: ETSI	Descriptions of T1 Switch Types (continued): The following options are methods that enable Robbed Bit Signaling (RBS) on the CNX:  FXO Loop Start - Foreign exchange office loop start signaling. FXO Ground Start - Foreign exchange office ground start signaling. FXS Loop Start - Foreign exchange subscriber loop start signaling. FXS Ground Start - Foreign exchange subscriber ground start signaling. E & M - Ear & mouth signaling  Descriptions of E1 Switch Types: ETSI - Specifies the European Telecommunications			
	Direction	USER SIDE	Standards Institute (ETSI) switch; reflects the latest revision (TBR4).  USER SIDE NETWORK SIDE  Description: Specifies the location of the T1 ISDN PRI connection.			
	Line Coding	For T1 Framing: AMI	For T1 Framing: AMI B8ZS			
		For E1 Framing: HDB3	For E1 Framing: HDB3			
	Line Framing	For T1 Framing: ESF	For T1 Framing: ESF SF			
		For E1 Framing: CCS	For E1 Framing: CCS			
	Loopback	DISABLE	DISABLE LOCAL REMOTE			

Action				
T1/E1 attributes continued.				
Attribute	Default	Valid Values/Description		
Line Buildout	For T1 Framing: 0 to 110 ft.(DSX-1) For E1 Framing: 120 Ohms	For T1 Framing: Short-haul values: 0 to 110 ft.(DSX-1) 110 to 220 ft. (DSX-1) 220 to 330 ft. (DSX-1) 330 to 440 ft. (DSX-1) 440 to 550 ft. (DSX-1) 550 to 660 ft. (DSX-1)		
		Long-haul values: 0 dB (long haul) -7.5 dB (long haul) -15 dB (long haul) -22.5 dB (long haul)		
		For E1 Framing: 120 Ohms		
CRC	ENABLE	ENABLE DISABLE		
Note: Applies to E1 Framing only.				
Overlap  Note: Applies to E1 Framing only.	DISABLE	ENABLE DISABLE		
Number of digits	0	0 to 10		
Note: Applies to T1 RBS or E1 PRI only.		<b>Description</b> : Sets the number of digits to wait before starting the PIN collection announcement. This field is enabled only if the Switch Type is set to an RBS value for T1 or PRI ETSI for E1.		
Port 1	ENABLE	ENABLE DISABLE		
Port 2	DISABLE	ENABLE DISABLE		
Port 3	DISABLE	ENABLE DISABLE		
Port 4	DISABLE	ENABLE DISABLE		
	Attribute Line Buildout  CRC Note: Applies to E1 Framing only. Overlap Note: Applies to E1 Framing only. Number of digits Note: Applies to T1 RBS or E1 PRI only.  Port 1  Port 2  Port 3	Attribute  Line Buildout  CRC  Note: Applies to E1 Framing only.  Overlap  Note: Applies to E1 Framing only.  Number of digits  Note: Applies to T1 RBS or E1 PRI only.  Port 1  ENABLE  Port 2  DISABLE  DISABLE  DISABLE  Port 3  DISABLE		

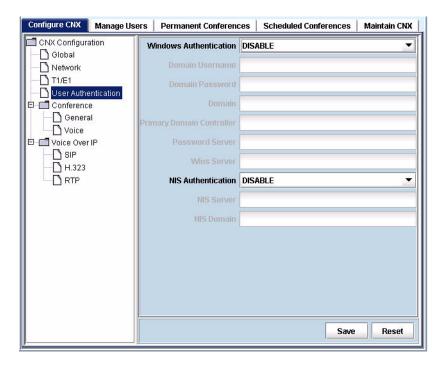
#### Step Action

#### **User Authentication Configuration**

12 Under the CNX Configuration object, click "User Authentication".

Result: The Aastra CNX User Authentication attribute fields display.

**Note:** Users may be authenticated against a secure local database stored on the Aastra CNX, or against an external server. The Aastra CNX first tries the local database, then the Network Information Service (NIS), then Windows. System administrators must be authenticated locally on the Aastra CNX.

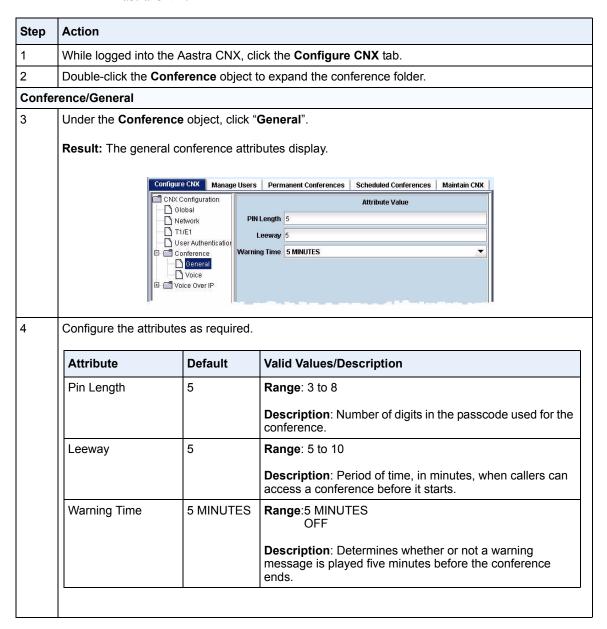


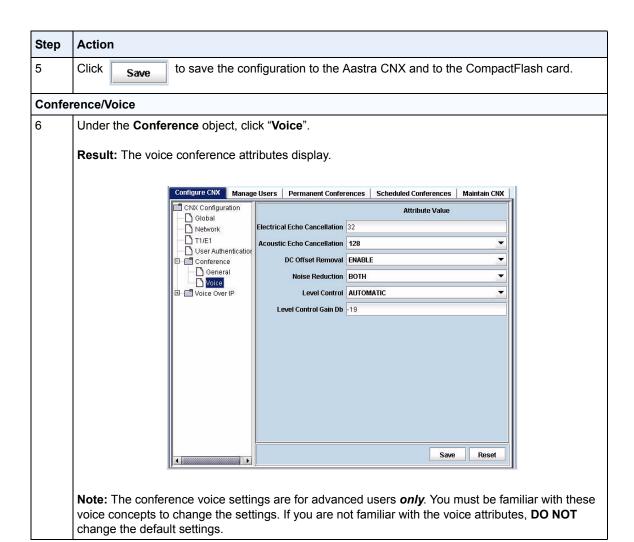
Step	Action				
13	Configure the attributes as required.				
	Attribute	Default	Valid Values/Description		
	Windows Authentication	DISABLE	ENABLE DISABLE		
			<b>Description</b> : Specifies whether or not to authenticate a user against a Windows server.		
	Domain Username	None	<b>Description</b> : Specifies the username of a Windows domain administrator.		
			<b>Note:</b> This is used once to register the Aastra CNX with the Windows domain.		
	Domain Password	None	<b>Description</b> : Specifies the password of a Windows domain administrator.		
			<b>Note:</b> This is used once to register the Aastra CNX with the Windows domain.		
	Domain	None	<b>Description</b> : Specifies the Windows domain that the Aastra CNX uses. This is the default domain for users who do not specify a domain and for users who do not have accounts on the Aastra CNX.		
	Primary Domain Controller	0.0.0.0	<b>Description</b> : Specifies the hostname or IP address of the server that the Aastra CNX uses to join the domain.		
			<b>Note:</b> The Primary Domain Controller (PDC) is considered the "master" DC on the network for a particular workgroup/domain.		
	Password Server	0.0.0.0	<b>Description</b> : Specifies the hostname or IP address of the server that the Aastra CNX uses to authenticate users.		
			<b>Note:</b> In most cases, this is also the PDC or a Backup Domain Controller (BDC).		
	Wins Server	0.0.0.0	<b>Description</b> : Specifies the hostname or IP address of the server that the Aastra CNX uses to resolve Windows names.		
			<b>Note:</b> WINS is a Microsoft Windows NT or Windows 2000 service that dynamically registers names of computers on the network. In most cases, the WINS server is the PDC or BDC.		

Step	Action					
13 (cont'd)	User Authentication attributes continued.					
	Attribute	Default	Valid Values/Description			
	NIS Authentication	DISABLE	DISABLE SERVER BROADCAST			
			<b>Description</b> : Specifies the method for which the Aastra CNX enables or disables Network Information System (NIS).			
			DISABLE - Disables NIS			
			SERVER - Uses a specific server for authentication with an optional NIS domain.			
			BROADCAST - Broadcast on the network for the specified NIS domain.			
	NIS Server	0.0.0.0	<b>Description</b> : Specifies the hostname or IP address that the Aastra CNX uses for NIS authentication.			
	NIS Domain	0.0.0.0	<b>Description</b> : Specifies the NIS domain that the Aastra CNX uses.			
14	Click Save to save the configuration to the Aastra CNX and to the CompactFlash card.					

# **Conference configuration**

Use the following procedure to configure the conference specifications for your Aastra CNX.

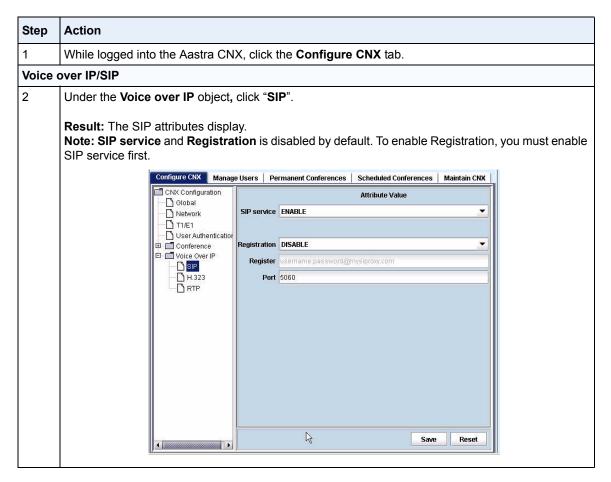




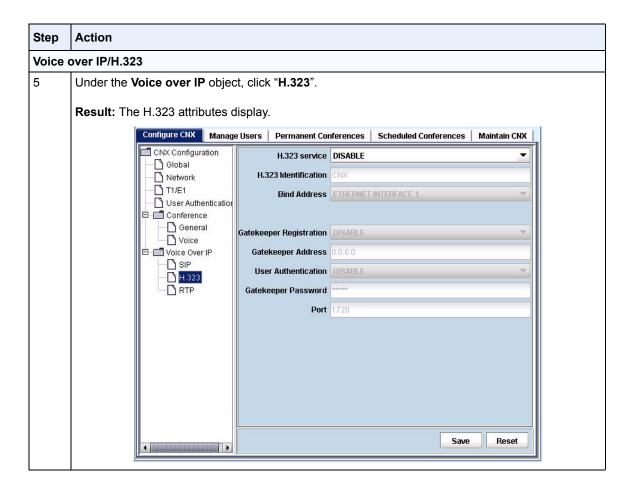
Step	Action					
7	Configure the attributes as required.					
	Attribute	Default	Valid Values/Description			
	Electrical Echo Cancellation	32	Range: 0 (disabled), 32 to 128 in increments of 4 ms  Note: The Aastra CNX echo canceller is G.168 (2002) compliant.			
	Acoustic Echo Cancellation	128	Range: 0 (disabled), 128, 256, 512, or 1024 ms			
	DC Offset Removal	ENABLE	ENABLE DISABLE			
	Noise Reduction	вотн	BOTH NONE ADAPTIVE CONFERENCE			
	Level Control	AUTOMATIC	AUTOMATIC MANUAL			
	Level Control Gain Db	-19	Automatic Level Control: -40 to 0			
			Manual Level Control: -24 to 24			
8	Click Sawe to save the configuration to the Aastra CNX and to the CompactFlash card.					

# Voice over IP configuration

Use the following procedure to configure the voice over IP specifications for your Aastra CNX.

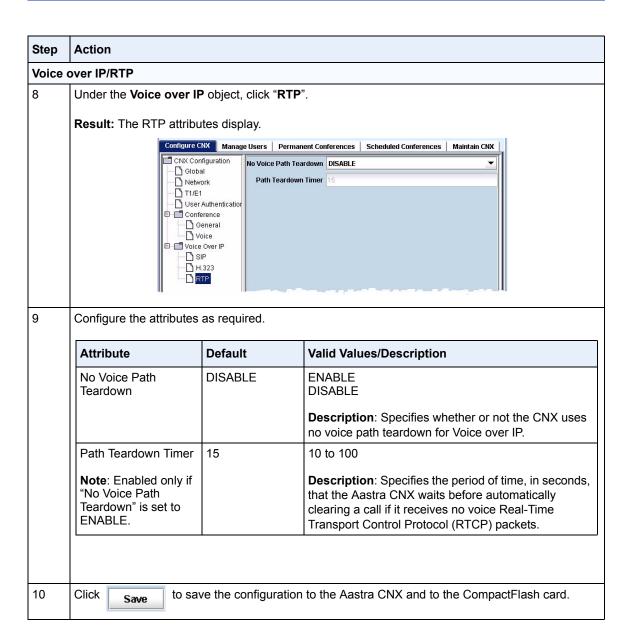


Step	Action					
3	Configure the attributes as required.					
	Attribute	Default	Valid Values/Description			
	SIP service	ENABLE	ENABLE DISABLE			
	Registration	DISABLE	ENABLE DISABLE			
	Register Note: Enabled only if Registration is	username:password @mysipproxy.com	Up to 80 integers or characters in the form name@domain.com where name is the authentication name of the Aastra CNX and the domain is the domain name (or IP address) of the SIP registration server.			
	set to ENABLE.		<b>Note:</b> The ":password" in the default value is optional. It is required only if the authenticate field is set to <b>true</b> .			
	Port	5060	1,024 to 64,000			
4	Click Save to save the configuration to the Aastra CNX and to the CompactFlash card					



Step	Action				
6	Configure the attributes as required.				
	Attribute	Default	Valid Values/Description		
	H.323 service	DISABLE	ENABLE DISABLE		
			<b>Description</b> : Enables or disables the H.323 protocol on the Aastra CNX. H.323 is an international standard protocol for multimedia communication over packet-switched networks, including LANs, WANs, and the Internet.		
	H.323 Identification CNX  Note: Enabled only if H.323 service is set to ENABLE.		<b>Description</b> : The equipment that has H.323 enabled in the network.		
	Bind Address  Note: Enabled only if H.323 service is set to ENABLE.	ETHERNET INTERFACE 1	ETHERNET INTERFACE 1 ETHERNET INTERFACE 2  Description: Specifies the interface on the Aastra CNX that is being used to gain access to the H.323 gatekeeper.		
	Gatekeeper Registration  Note: Enabled only if H.323 service is set to ENABLE.	DISABLE	ENABLE DISCOVER  Description: Enables or disables the Aastra CNX to locate the H.323 Gatekeeper. If set to DISCOVER, the Aastra CNX searches until it discovers the Gatekeeper when specifying by IP address or hostname.  Note: When using H.323, the Aastra CNX functions as a terminal appearing as a peer to H.323-based IP phones. You can configure the Aastra CNX to work with one or more H.323 gatekeepers.		

Step	Action				
6 (cont'd)	H.323 attributes continued.				
	Attribute	Default	Valid Values/Description		
	Gatekeeper Address  Note: Enabled only if Gatekeeper Registration is set to ENABLE.	0.0.0.0	<b>Description</b> : The IP address of the Gatekeeper in the network.		
	User Authentication  Note: Enabled only if Gatekeeper Registration is set to ENABLE.	DISABLE	ENABLE DISABLE  Description: Specifies whether or not authentication is enabled or disabled on the Aastra CNX.  Authentication is the process of verifying whether a user is allowed access to the Aastra CNX using the H.323 protocol over a LAN, WAN, or over the Internet.		
	Gatekeeper Password  Note: Enabled only if User Authentication is set to ENABLE.	***	<b>Description</b> : Specifies the password that the Aastra CNX uses to gain access to the H.323 gatekeeper.		
	Port  Note: Enabled only if Gatekeeper Registration is set to ENABLE.	1720	1024 to 64000 <b>Description</b> : Specifies the User Datagram Protocol (UDP) port on the Aastra CNX that listens for and receives/processes H.323 messages.		
7	Click Save to sav	ve the configuration	on to the Aastra CNX and to the CompactFlash card.		



# Chapter 4 Managing the Aastra CNX

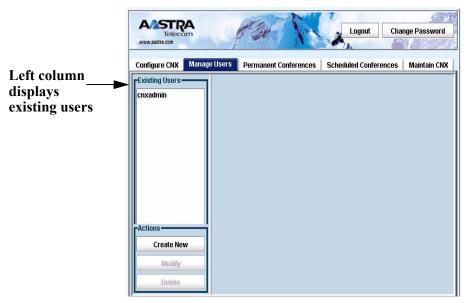
# Managing users on the Aastra CNX

# **Description**

A system administrator manages registered users and other system administrators on the Aastra CNX by accessing the **Manage Users** tab on the GUI main page.

The following illustration shows the Aastra CNX **Manage Users** tab in the Aastra CNX GUI with an existing user of "**cnxadmin**".

# **Aastra CNX Manage Users tab**



## **Procedures**

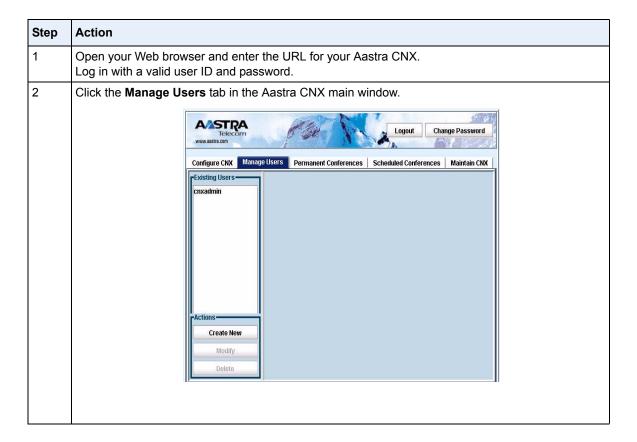
This section provides procedures for creating, modifying, and deleting Aastra CNX registered users and system administrators.

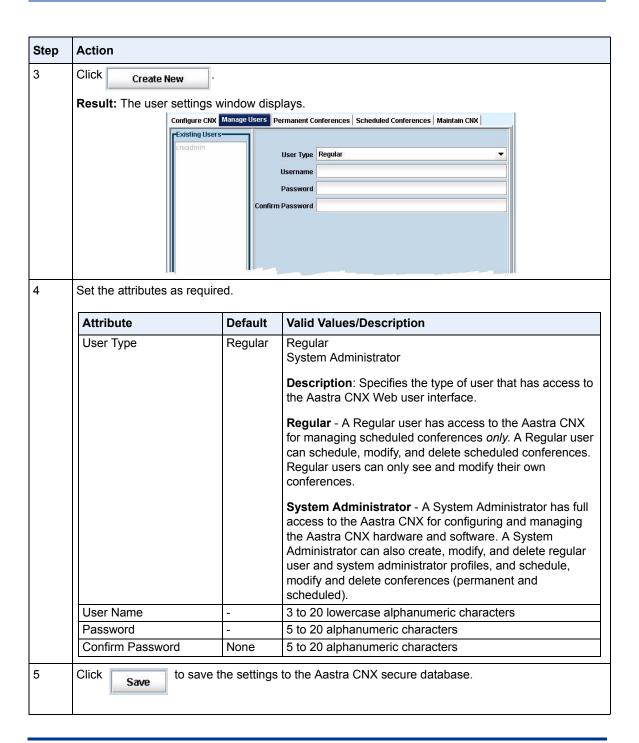


**Note:** You cannot modify or delete the "**cnxadmin**" System Administrator. If you logged in as "**cnxadmin**", you can change your password using the Change Password button.

# Creating a registered user/system administrator

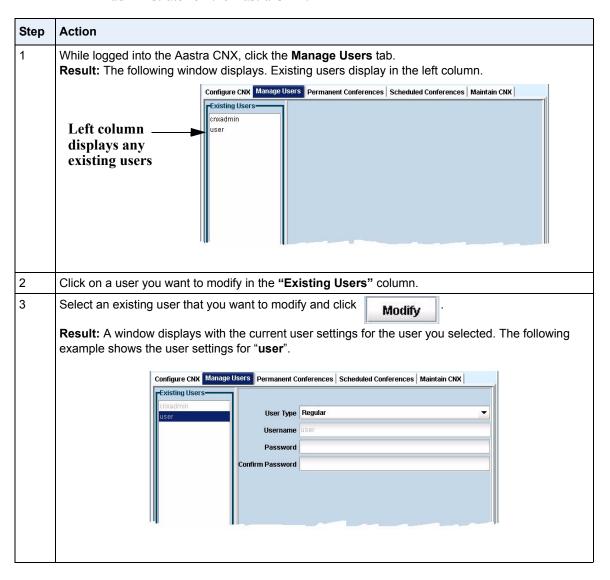
Use the following procedure to create a registered user and/or system administrator on the Aastra CNX.





# Modifying a registered user/system administrator

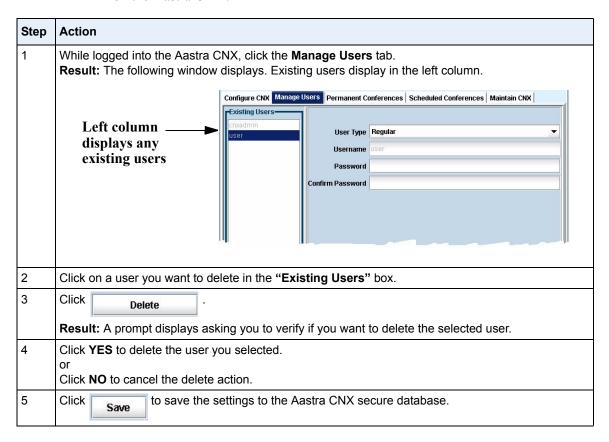
Use the following procedure to modify an existing registered user and/or system administrator on the Aastra CNX.



Step	Action
4	Modify the attributes as required.
	<b>Note:</b> You can modify the password and confirm password fields only. Usernames cannot be modified.
5	Click Save to save the settings to the Aastra CNX secure database.

# Deleting a user/system administrator

Use the following procedure to delete an existing user and/or system administrator on the Aastra CNX.

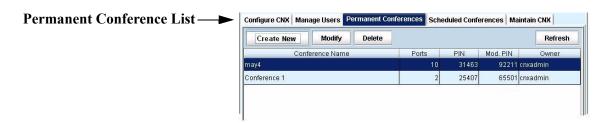


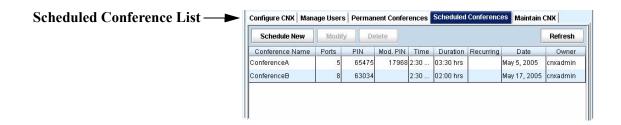
# Managing conferences on the Aastra CNX

# **Description**

A system administrator manages conferences on the Aastra CNX by accessing the **Permanent Conferences** tab and/or the **Scheduled Conferences** tab on the GUI main page.

The following illustration shows the Aastra CNX **Permanent Conferences** and **Scheduled Conferences** tab in the Aastra CNX GUI with example conferences scheduled







**Note:** You can click on the column headings in the Permanent and Scheduled conference windows to sort the columns in ascending or descending order.

## **Permanent Conference List**

A Permanent Conference List displays for system administrator use *only*. These conferences are permanently available, and are also known as "reservationless" or "ad-hoc" conferences. You create permanent conferences with a guaranteed number of ports that are reserved for that particular conference. Additional participants may join the conference subject to availability of ports in the pool of ports reserved for permanent conferences.



**Note:** Moderated permanent conferences end when a moderator leaves the conference, and all participants are disconnected.

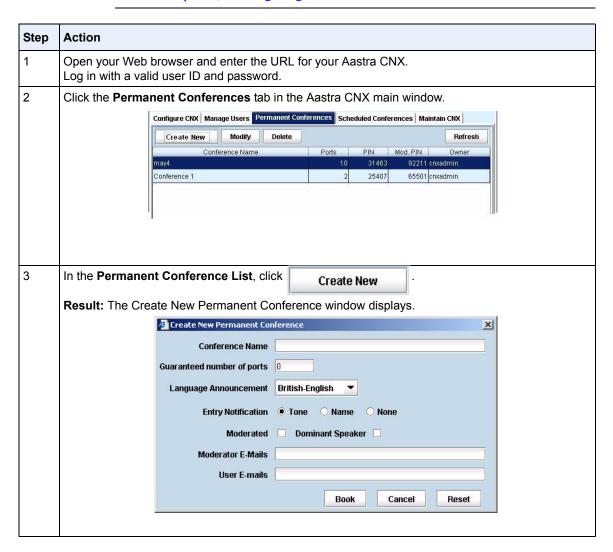
A system administrator can schedule new, modify, or delete permanent conferences from the list as required.

# Booking a new permanent conference

Use the following procedure to schedule a new permanent conference on the Aastra CNX.



**Note:** Dial-in services must be configured and enabled to create permanent conferences. Before creating a conference, you must configure ISDN PRI or Voice over IP. For configuring dial-in services, see Chapter 3, "Configuring the Aastra CNX."



Step	Action								
4	Enter the information as re	equired.							
	Attribute	Default	Valid Values/Description						
	Conference Name	None	Up to 256 alphanumeric characters						
	Guaranteed Number of Ports	0	For 30-port Aastra CNX: 2 to 30						
			For 60-port Aastra CNX: 2 to 60						
			For 120-port Aastra CNX: 2 to 120						
	Language Announcement	English	English British-English French-Canadian Spanish						
			<b>Description</b> : Specifies the language to be used for conference announcements.						
	Entry Notification	Tone	Tone Name None						
			<b>Description</b> : Specifies whether the Aastra CNX uses tones, names, or nothing when a conference participant enters and exits from a conference.						
			Notes: 1. If you select Names for conference entry notification, the exit notification will be Tone.						
			2. When booking a conference with more than 10 participants, it is recommended that Entry Notification be set to <b>Tone</b> or <b>None</b> . Using <b>Name</b> notification with larger conferences may lead to delays in joining the conference and excessive interruptions when multiple participants join the conference.						

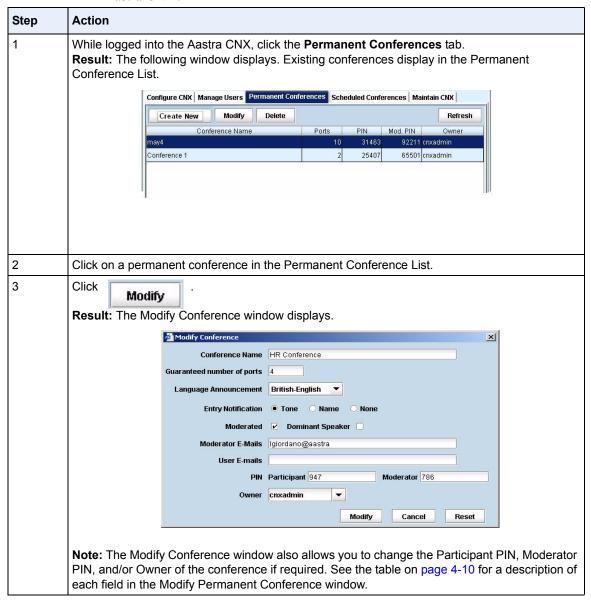
Step	Action								
4 (cont'd)	Schedule new permanent conference window continued								
	Attribute	Default	Valid Values/Description						
	Moderated	Not checked (disabled)	Not checked (disabled)  Checked (enabled)  Description: Specifies whether or not the conference has been assigned a moderator. A moderator is one who acts as a chairperson and has the authority to control the conference. If you enable this field, you may enter a moderator email address in the "Moderator Email" field.						
	Dominant Speaker (Applicable only if Moderated field is enabled.)	Not checked (disabled)	Checked (enabled)  Description: Allows a moderator to be the dominant speaker in a conference. If enabled, all other participants of the conference are attenuated by 15dB so that the moderator is the dominant voice. This feature is recommended for large conferences where the moderator acts as a chair-person.  Note: You must have the Noise Reduction field enable at Configure CNX/Conference/Voice if enabling Dominant Speaker.						
	Moderator E-Mails	None	Alphanumeric characters in the form name@domain.com where name is the email name of the moderator and the domain is the domain name of the email server. Multiple email addresses must be separated by a comma, space, or semicolon.						
	User E-Mails	None	Alphanumeric characters characters in the form name@domain.com where name is the email name of the user and the domain is the domain name of the email server. Multiple email addresses must be separated by a comma, space, or semicolon.  Note: User emails do not include the moderator PIN for a conference if it is moderated.						

Step	Action									
4 (cont'd)	Schedule new permanent conference window continued									
	Attribute	Default	Valid Values/Description							
	PIN Participant  (Applicable only when modifying an existing permanent conference.)		Description: Specifies the current participant passcode for the conference. (Up to 8 numeric characters)  Note: If you modify this passcode, you must notify the participants of the change in order for them to access the conference. This field is for system administrator use only. User's must contact the system administrator to request a passcode change.							
	Moderator  (Applicable only when modifying an existing permanent conference that has a moderator assigned.)	<moderator passcode&gt;</moderator 	Description: Specifies the current moderator passcode for the conference. (Up to 8 numeric characters)  Note: If you modify this passcode, you must notify the moderators of the change in order for them to access the conference. This field is for system administrator use only. User's must contact the system administrator to request a passcode change.							
	Owner  (Applicable only when modifying an existing permanent conference.)	cnxadmin	cnxadmin Also lists all the users configured on the Aastra CNX.  Description: This field allows you to change the ownership of the permanent conference if required.							

Step	Action						
5	Click Book .						
	<b>Result:</b> If a Moderator was <i>not</i> selected for the conference, a message similar to the following displays:						
	The conference phone number is 4477						
	The participant PIN code is 26845						
	ОК						
	If a moderator was selected (enabled), a message similar to the following displays:						
	The conference phone number is 4477						
	The participant PIN code is 99051 The moderator PIN code is 93418						
	The moderator PIN Code is 93418						
	OK						
6	Click <b>OK</b> to save the conference to the Aastra CNX.						

# Modifying a permanent conference

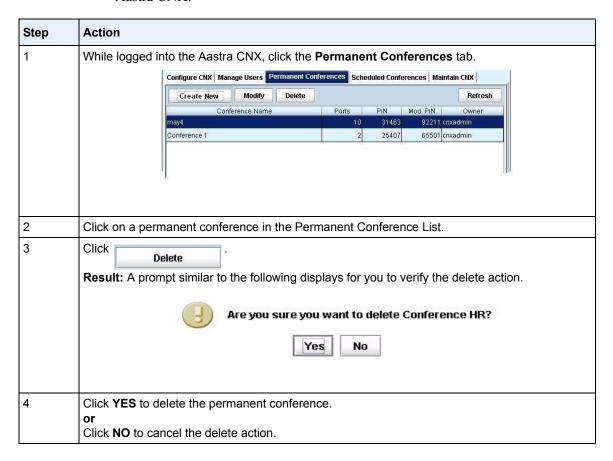
Use the following procedure to modify an existing permanent conference on the Aastra CNX.



Step	Action
4	Modify the conference as required and click Book .
	Result: The Modify Complete window displays.
	Click <b>OK</b> .
	The conference displays in the Permanent Conference List with the new changes.

#### Deleting a permanent conference

Use the following procedure to delete an existing permanent conference on the Aastra CNX.



## **Scheduled Conference List**

A Scheduled Conference List consists of temporary conferences that occur for a scheduled period with a start time and end time. Once the conference is complete, the scheduled conference no longer displays in the Scheduled Conference List and the port(s) that the conference was using are made available.



**Note:** Moderated scheduled conferences do not end when a moderator leaves the conference. Participants of a moderated scheduled conference can continue the conference without the moderator present.

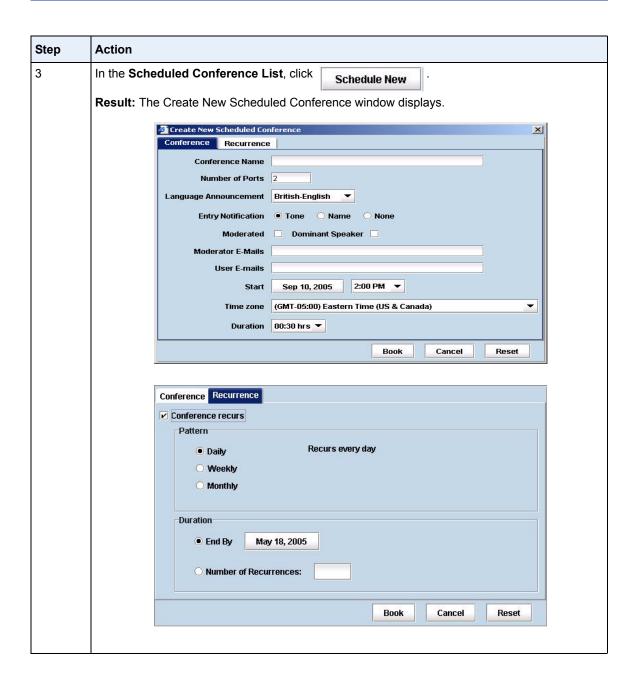
#### Booking a new scheduled conference

Use the following procedure to book a new scheduled conference on the Aastra CNX.



**Note:** Dial-in services must be configured and enabled to create scheduled conferences. Before creating a conference, you must configure ISDN PRI or Voice over IP. For configuring dial-in services, see Chapter 3, "Configuring the Aastra CNX."

Step	Action									
1		b browser and enter the URL for your Aastra CNX. alid user ID and password.								
2	Click the <b>Scheduled Conferences</b> tab in the Aastra CNX main window.									
		Configure CNX   Man	age User	s Permar	nent Confei	ences	Scheduled	Conferenc	es Maintain (	CNX
		Schedule New	Modif	y De	elete					Refresh
		Conference Name	Ports	PIN	Mod. PIN	Time		Recurring		Owner
		ConferenceA	5	65475	0.000000		03:30 hrs		May 5, 2005	cnxadmin
		ConferenceB	8	63034		2:30	02:00 hrs		May 17, 2005	cnxadmir



## Step Action

#### Conference tab

Click on the Conference tab and enter the information as required; then click on the Recurrence tab to set the recurrence pattern.

Attribute	Default	Valid Values/Description
Conference Name	None	Up to 256 alphanumeric characters
Number of Ports	2	For 30-port Aastra CNX: 2 to 30
		For 60-port Aastra CNX: 2 to 60
		For 120-port Aastra CNX: 2 to 120
Language Announcement	English	English British-English French-Canadian Spanish
		<b>Description</b> : Specifies the language to be used for conference announcements.
Entry Notification	Tone	Tone Name None
		<b>Description</b> : Specifies whether the Aastra CNX uses tones, names, or nothing when a conference participant enters and exits from a conference.
		Notes:  1. If you select Names for conference entry notification, the exit notification will be Tone.
		2.When booking a conference with more than 10 participants, it is recommended that Entry Notification be set to <b>Tone</b> or <b>None</b> . Using <b>Name</b> notification with larger conferences may lead to delays in joining the conference and excessive interruptions when multiple participants join the conference.

Action				
Schedule New Conference window continued.				
Attribute	Default	Valid Values/Description		
Moderated	Not checked (disabled)	Not checked (disabled)  Checked (enabled)  Description: Specifies whether or not the conference has been assigned a moderator. A moderator is one who acts as a chairperson and has the authority to control the conference. If you enable this field, you may enter a moderator email address in the "Moderator Email" field.		
Dominant Speaker  (Applicable only if Moderated field is enabled.)	Not checked (disabled)	Not checked (disabled)  Checked (enabled)  Description: Allows a moderator to be the dominant speaker in a conference. If enabled, all other participants of the conference are attenuated by 15dB so that the moderator is the dominant voice. This feature is recommended for large conferences where the moderator acts as a chair-person.  Note: You must have the Noise Reduction field enabled at Configure CNX/Conference/Voice if enabling Dominant Speaker.		
Moderator E-Mails	None	Alphanumeric characters in the form name@domain.com where name is the email name of the moderator and the domain is the domain name of the email server. Multiple email addresses must be separated by a comma, space, or semicolon.		
User E-Mails	None	Alphanumeric characters in the form name@domain.com where name is the email name of the user and the domain is the domain name of the email server. Multiple email addresses must be separated by a comma, space, or semicolon.  Note: User emails do not include the moderator PIN for a conference if it is moderated.		
	Attribute  Moderated  Dominant Speaker (Applicable only if Moderated field is enabled.)  Moderator E-Mails	Schedule New Conference window continue  Attribute  Moderated  Default  Not checked (disabled)  (Applicable only if Moderated field is enabled.)  Moderator E-Mails  None		

Step	Action				
4 (cont'd)	Schedule New Conference window continued.				
	Attribute	Default	Valid Values/Description		
	Start	<current pc<br="">Date and Time&gt;</current>	Date: Specifies the month, day, and year that the scheduled conference is to begin.  July 2004 Sum Mon Tue W Thu Fri Sat 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31  Time: Specifies the time of day that the scheduled conference is to begin. (Values are 12:00 A.M. through 11:30 P.M.)		
	Timezone	GMT-05:00 Eastern Time (USA and Canada)	<b>Description</b> : Specifies the timezone to use when scheduling a conference.		
	Duration	00:30 hrs	<b>Description</b> : Duration of the conference. Valid values are in 30 minute increments from 00:30 hrs. to 23:30 hrs.		
	PIN Participant  (Applicable only when modifying an existing scheduled conference.)	<participant passcode=""></participant>	Description: Specifies the current participant passcode for the conference. (Up to 8 numeric characters)  Note: If you modify this passcode, you must notify the participants of the change in order for them to access the conference. This field is for system administrator use only. User's must contact the system administrator to request a passcode change.		

Attribute	Default	Valid Values/Description
Moderator  (Applicable only when modifying an existing scheduled conference that has a moderator assigned.)	<moderator passcode=""></moderator>	Description: Specifies the current moderator passcode for the conference. (Up to 8 numeric characters)  Note: If you modify this passcode, you must notify the moderators of the change in order for them to access the conference. This field is for system administrator use only. User's must contact the system administrator to request a passcode change.
Owner  (Applicable only when modifying an existing scheduled conference.)	cnxadmin	cnxadmin Also lists all the users configured on the Aastra CNX.  Description: This field allows you to change the ownership of the scheduled conference if required

5 Schedule New Conference window continued.

Action

Step

Recurrence tab

Attribute	Default	Valid Values/Description
Conference recurs	Not checked	Not checked (disabled)
	(disabled)	Checked (enabled)
		, , , , , , , , , , , , , , , , , , , ,
	Samuel	<b>Description</b> : Specifies whether or not the
		scheduled conference is to recur.
Pattern	Daily	<b>Description</b> : Specifies the recurrence pattern for
		the conference.
(Pattern attributes are		
enabled only if		Daily: Recurs every day
"Conference recurs" is		Weekly: Sunday to Saturday.
checked)		Weekiy. Sunday to Saturday.
		Monthly: Recurrence period (first, second,
		third, fourth, or last) and the day of
		recurrence from Sunday to Saturday.

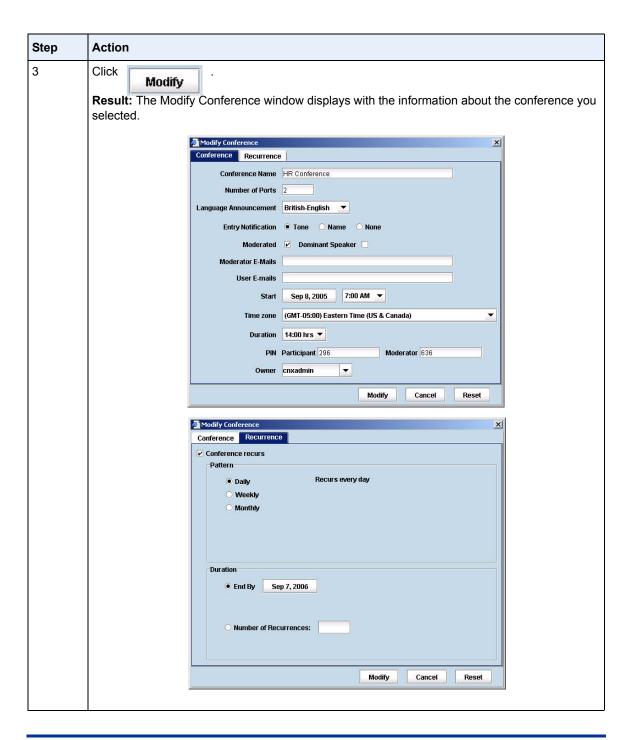
Step	Action			
5 (cont'd)	Schedule New Conference window continued.			
	Attribute	Default	Valid Values/Description	
	Duration  (Duration attributes are enabled only if "Conference recurs" is checked.	End by <current date&gt;</current 	Description: Specifies the month, day, and year that the scheduled conference is to end and the number of recurrences of the conference.  July 2004 Sum Mon Tue W Thu Fit Sat 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31  End by: <month><day><year> Number of recurrences: 1 to 500  Note: Conferences cannot be scheduled more than 2 years in advance.</year></day></month>	
6	Click Book  Result: A verification window displays asking you to confirm that the information you entered the scheduled conference is correct. The following is an example of the window that displays  The conference will occur every Wednesday effective from May 18, 2005 until May 25, 2005 at 12:00 AM to 12:30 AM EST/EDT (America/New_York)  Yes No			

Step	Action
7	Click <b>YES</b> if the information you entered is correct. or Click <b>NO</b> to close the verification window and reenter correct information in the "Schedule New Conference" window.
	<b>Result:</b> If you click <b>YES</b> , a confirmation window displays with the applicable passcode(s) used for the conference. If a Moderator was <i>not</i> selected for the conference, a Participant passcode displays in the confirmation window.
	The conference phone number is 4477 The participant PIN code is 26845  OK
	If a moderator was selected (enabled), the confirmation window displays the Participant PIN and the Moderator PIN.
	The conference phone number is 4477 The participant PIN code is 99051 The moderator PIN code is 93418  OK
8	Click <b>OK</b> to save the conference to the Aastra CNX. <b>Result:</b> The conference and all of its attributes display in the Scheduled Conference List.

## Modifying a scheduled conference

Use the following procedure to modify an existing scheduled conference on the Aastra CNX.

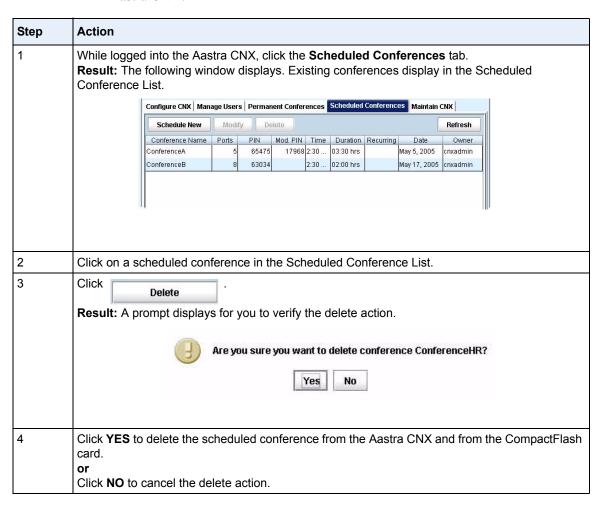
Step	Action
1	While logged into the Aastra CNX, click the <b>Scheduled Conferences</b> tab.  The following window displays. Existing conferences display in the Scheduled Conference List
	Configure CNX   Manage Users   Permanent Conferences   Scheduled Conferences   Maintain CNX
	Schedule New Modify Delete Refresh
	Conference Name Ports PIN Mod. PIN Time Duration Recurring Date Owner  ConferenceA 5 65475 17968 2:30 03:30 hrs May 5, 2005 cnxadmin
	ConferenceB 8 63034 2:30 02:00 hrs May 17, 2005 cnxadmin
2	Click on a scheduled conference in the Scheduled Conference List.



Step	Action
4	Modify the conference and recurrence as required and click Book
	<b>Note:</b> The Modify Conference window also allows you to change the Participant PIN, Moderator PIN and/or Owner of the conference if required. See the table on page 4-18 for a description of each field in the Modify Conference window.
<b>Result:</b> A verification window displays asking you to confirm that the information the scheduled conference is correct. The following is an example of the window to	
	The conference will occur every Wednesday effective from May 18, 2005 until May 25, 2005 at 12:00 AM to 12:30 AM EST/EDT (America/New_York)  Yes No
5	Click <b>YES</b> if the information you entered is correct. or Click <b>NO</b> to close the verification window and reenter correct information in the "Schedule New Conference" window.
6	Click <b>OK</b> to save the conference to the Aastra CNX. <b>Result</b> : The conference displays with the changes in the Scheduled Conference List.

#### Deleting a scheduled conference

Use the following procedure to delete an existing scheduled conference on the Aastra CNX.

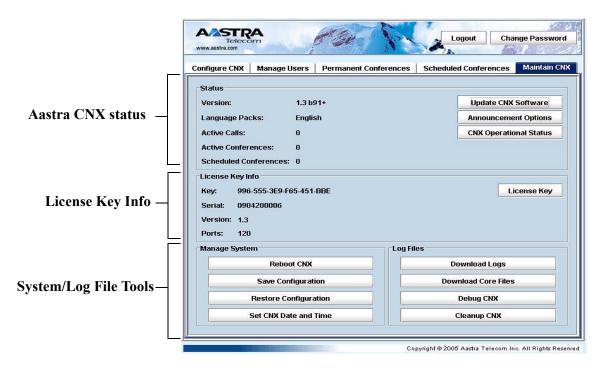


# Chapter 5 Maintaining the Aastra CNX

## **Overview**

## **Description**

You can maintain the Aastra CNX by accessing the **Maintain CNX** tab in the Graphical User Interface (GUI). The following illustration shows the **Maintain CNX** tab in the Aastra CNX GUI.



The following information can be found on the Maintain CNX tab:

Maintain CNX tab		Allows you to:	
Status		Display current software version, language pack, number of active calls, number of active conferences, number of scheduled conferences	
	Update CNX Software	Update Aastra CNX software     Load or remove language packs and customized conference greetings	
	Announcement Options  CNX Operational Status	Note: The CNX Operational Status button is for Technical Support use <i>only</i> and is not described in this guide.	
Licer	nse Key Info	Display key number, serial number, version, number of ports	
	License Key	- Enter a new license key for updated software	
Mana	age System	Maintain system functionality	
	Reboot CNX	- Reboot the Aastra CNX when required - Save an Aastra CNX configuration file to	
	Save Configuration	your PC - Restore a configuration file from your PC to	
	Restore Configuration  Set CNX Date and Time	the Aastra CNX - Set a date, clock time, and time zone on the Aastra CNX	

Maintain CNX tab	Allows you to:
Log Files	Maintain log files, core files, and CompactFlash disk space, and perform troubleshooting functions
Download Logs	Download Call Detail Records (CDRs)     Cleanup unwanted files on the
Download Core Files	CompactFlash to maximize disk space capacity
Debug CNX	Note: The Devented Core Files and Debug
Cleanup CNX	Note: The Download Core Files and Deb CNX buttons are for Technical Support use only and are not described in this guide. Al the "Support Logs" tab in the Download Logs screen is for Technical Support use of

# **Update CNX software**

#### **Description**

The **Update CNX Software** tool in the **Maintain CNX** window allows you to install software updates to the Aastra CNX.

The Aastra CNX software is packaged in a single file called "*cnx.dra*". You can place the *cnx.dra* file on your PC and use the **Update CNX Software** button to install the update.

The *cnx.dra* file automatically updates the onboard CNX flash and the CompactFlash card.

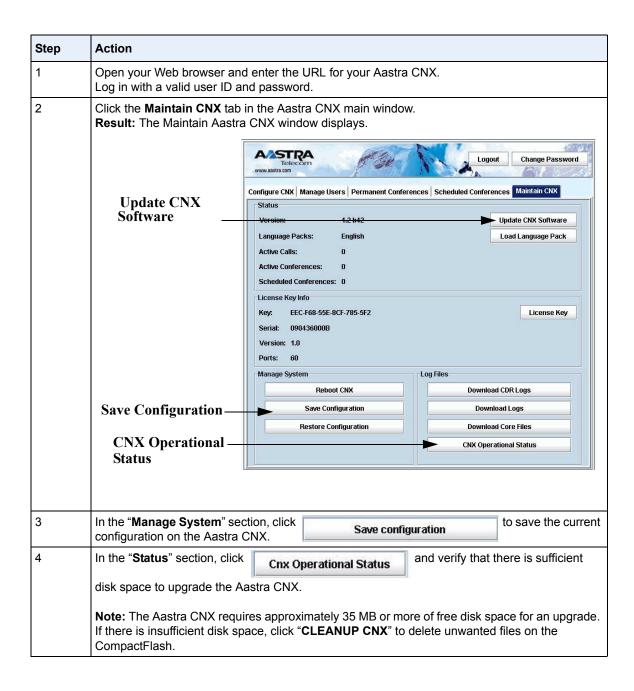
#### **Procedure**

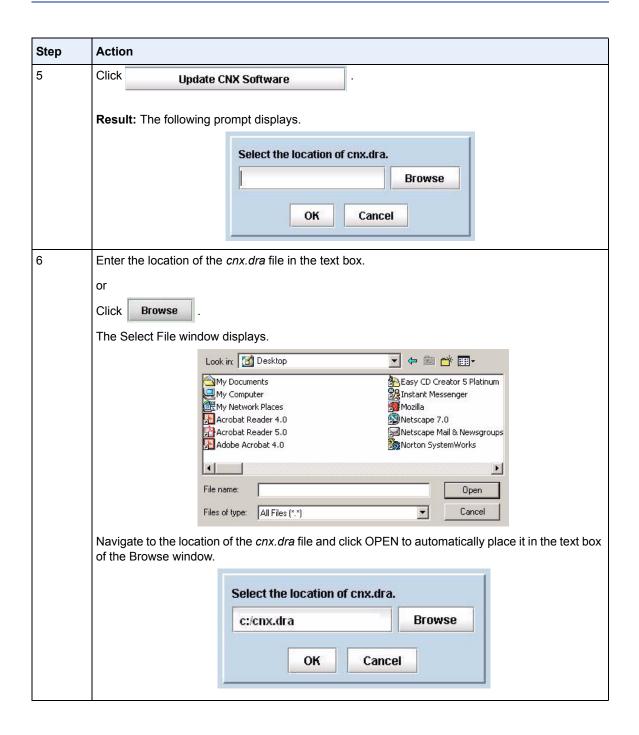
Use the following procedure to update your Aastra CNX software.

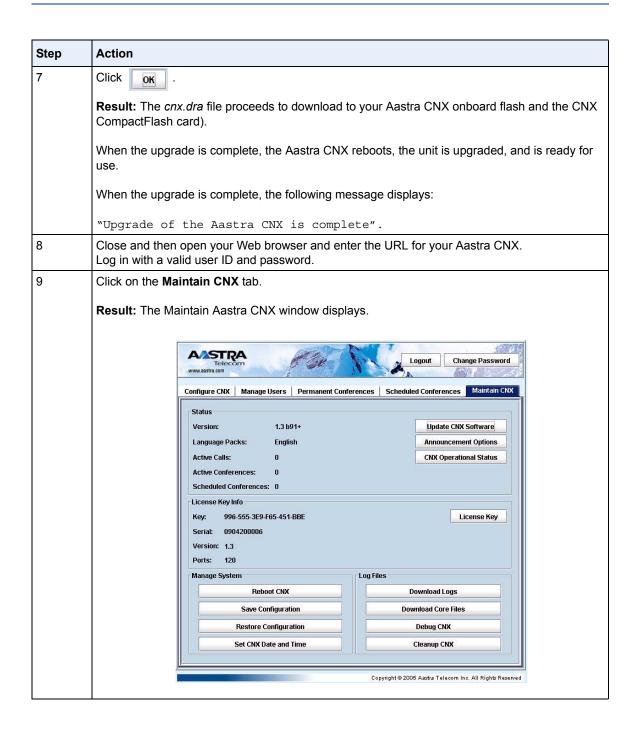


#### Notes:

- 1. After capacity upgrades and major software releases on the Aastra CNX, you must enter a new license key to activate the software.
- **2.** The CNX performs an automatic reboot as part of the upgrade process.







#### **Update CNX software**

Step	Action
10	Click Cnx Operational Status and verify the following:
	There is sufficient disk space for the operation of the Aastra CNX.     Note: The Aastra CNX requires approximately 35 MB or more of free disk space to operate properly.
	There are no PRI alarms.
	The Aastra CNX is accepting the following types of calls:
	PRI calls (including alarms on active PRI lines)
	SIP calls
	— H.323 calls
11	Click the <b>Permanent Conferences</b> or <b>Scheduled Conferences</b> tab to perform the following:
	<ul> <li>Verify that previous permanent and scheduled conferences are still present after the upgrade.</li> <li>Schedule new conferences with AND without a moderator to verify:</li> </ul>
	<ul> <li>that conferences can be created successfully.</li> <li>that moderators and users can join the conferences.</li> </ul>
12	After port upgrades and major software releases, enter a new license key using the procedure in the <i>Aastra CNX Conference Network Switch System Administrator Guide</i> , Chapter 5, the section, "Entering/Editing License Key."



**Note:** If any of the steps in the previous Update Procedure results in an error, contact your reseller for help first. Alternatively, you can contact Aastra Telecom Technical Support.

# **Announcement options**

## **Description**

The **Announcement Options** tool in the **Maintain CNX** window allows you to load or remove language packs and customized conference greetings to/from the Aastra CNX.

Language pack files are identified as "<language>.tar.gz". Customized greeting files are identified as "<filename>.pcm". Using the **Announcement Options** button, you can remove these files from your Aastra CNX, or you can load new files to the Aastra CNX from your PC.

This section describes the following announcement options:

- Loading/Removing language packs
- Loading/Removing customized greetings

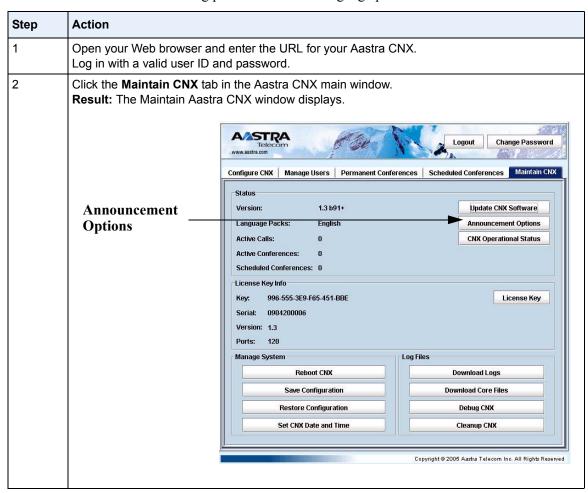
## Loading/removing language packs

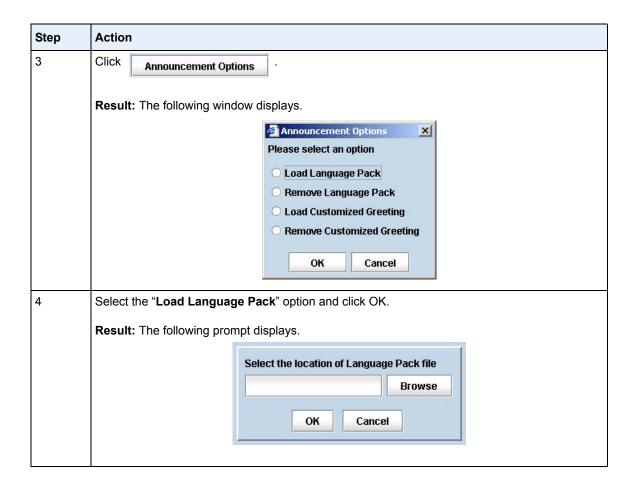
You can load or remove language packs to/from the Aastra CNX to provide various language options to users as required. A language pack includes announcements and GUI prompts in a specific language. The Aastra CNX has the following language packs available:

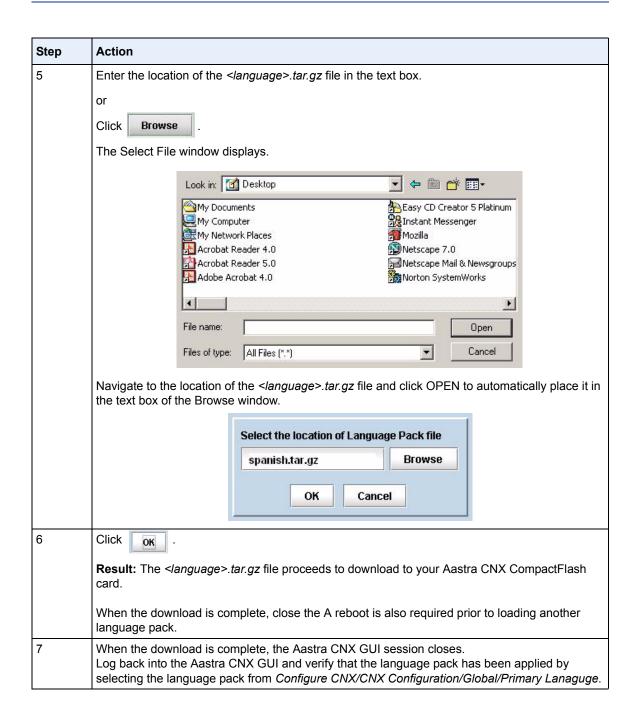
- English (default language)
- British-English (available for announcements only)
- French-Canadian
- Spanish

#### Procedure for loading language packs

Use the following procedure to load language packs to the Aastra CNX.

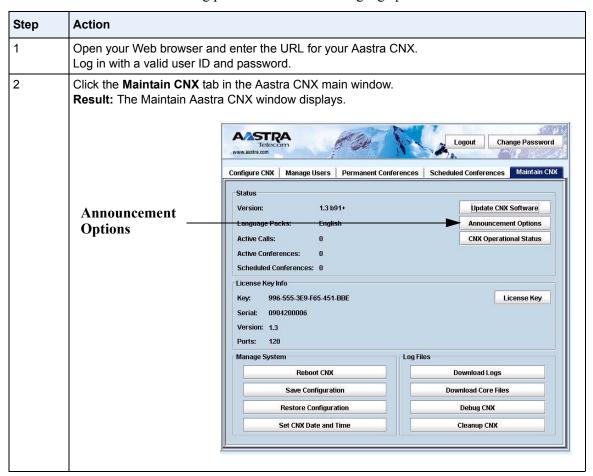




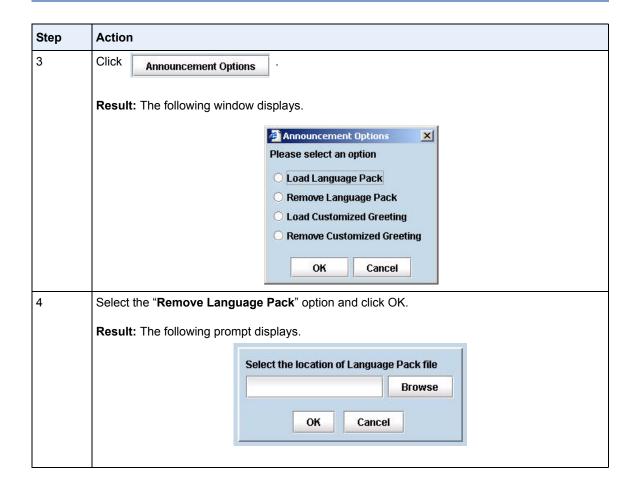


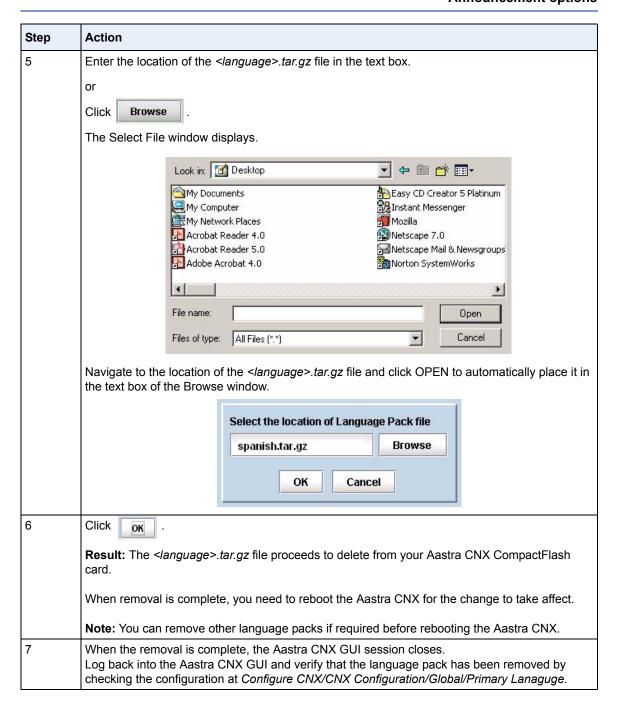
#### Procedure for removing language packs

Use the following procedure to remove language packs from the Aastra CNX.



#### **Announcement options**





#### Loading/removing customized greetings

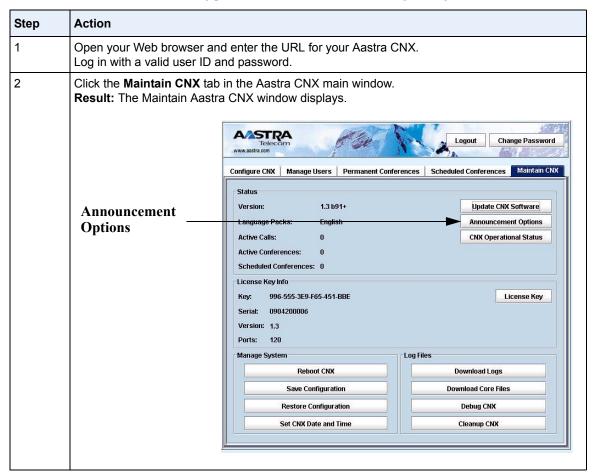
You can load or remove customized greeting files to/from the Aastra CNX to provide customized telephony access when joining conferences.

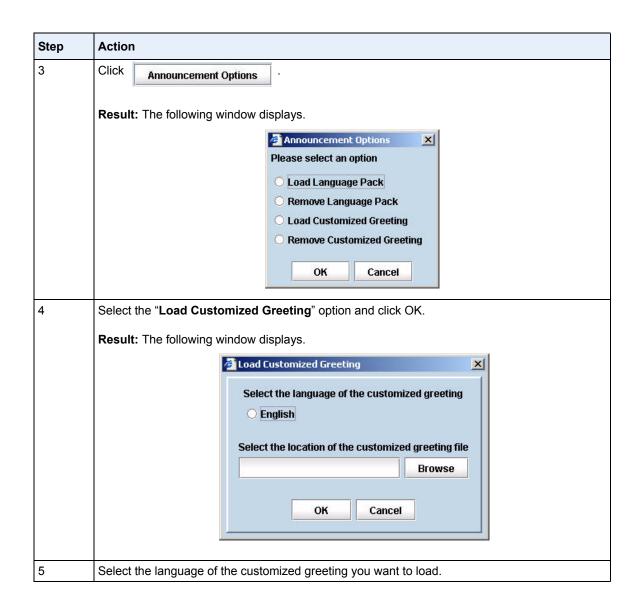


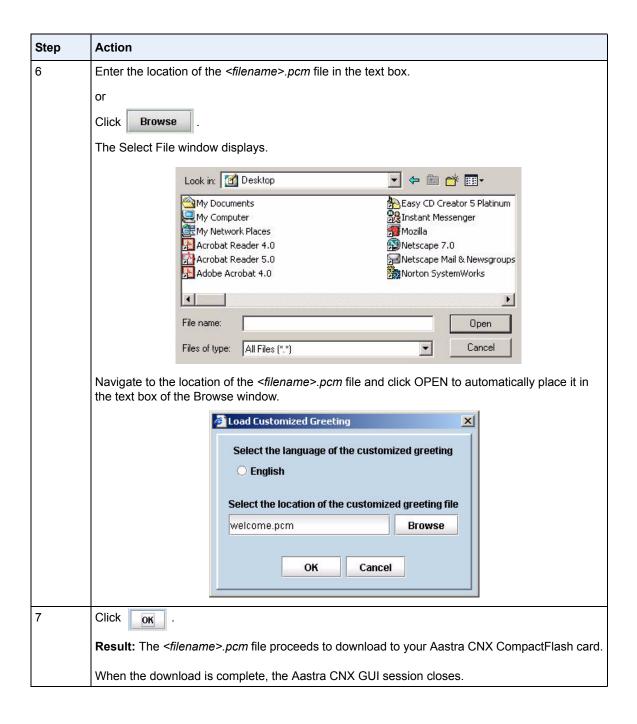
**Notes:** Create a customized greeting using an applicable recording application. Save the recording to a file on the PC.

#### Procedure for loading customized greetings

Use the following procedure to load a customized greeting to the Aastra CNX.

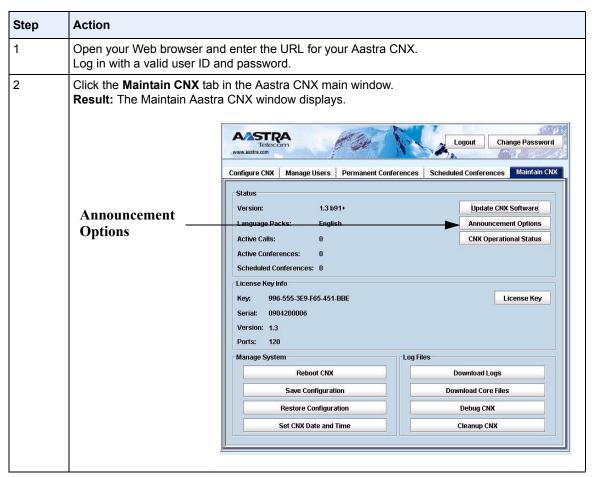




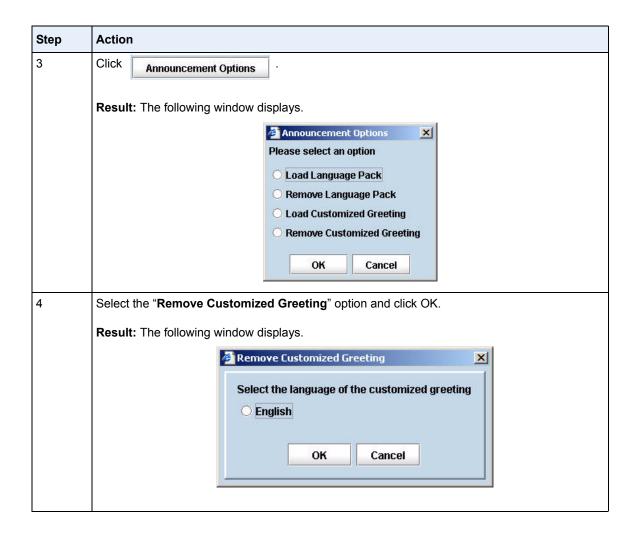


#### Procedure for removing customized greetings

Use the following procedure to remove a customized greeting from the Aastra CNX..



#### **Announcement options**

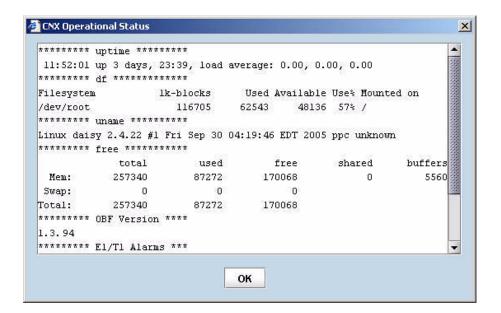


Step	Action
5	Select the language of the customized greeting you want to remove and click .
	Result: The following prompt displays:
	Remove Customized Greeting
	Are you sure you want to remove the customized English Greeting?
	Yes No
6	Click <b>YES</b> to remove the customized greeting.
	<b>Result:</b> The <i><filename>.pcm</filename></i> file proceeds to delete from your Aastra CNX CompactFlash card.
	When the download is complete, the Aastra CNX GUI session closes.

# **Operational status**

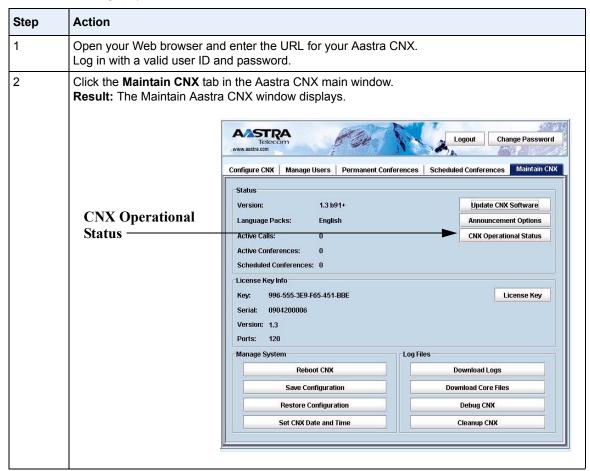
## **Description**

The **Operational Status** tool in the **Maintain CNX** window allows you to display operational information about the Aastra CNX, such as, the length of time the Aastra CNX has been up and running. This information can be useful when memory and on-board flash (OBF) version needs to be verified, and when T1/E1 alarms occur on the Aastra CNX.

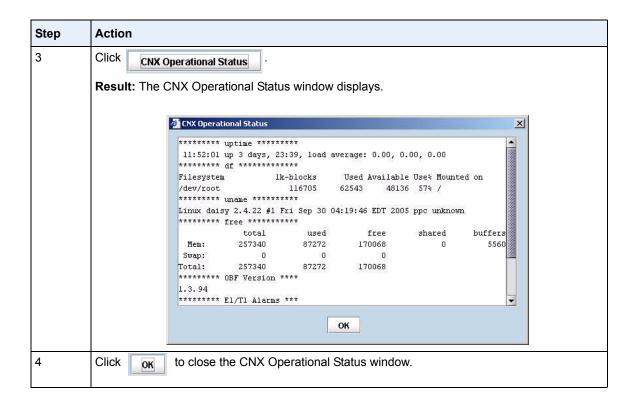


#### Displaying operational status

Use the following procedure to display the current operational status of the Aastra CNX.



#### **Operational status**



# **Entering/editing License Key**

# **Description**

The Aastra CNX has a license key assigned that specifically identifies the unit. When a you perform an update or upgrade to the Aastra CNX, the upgrade script requires that you input this license key for validation purposes.

The **Maintain CNX** tab displays the following license key information about the Aastra CNX:

- License key number
- Serial number
- License key version
- Total ports

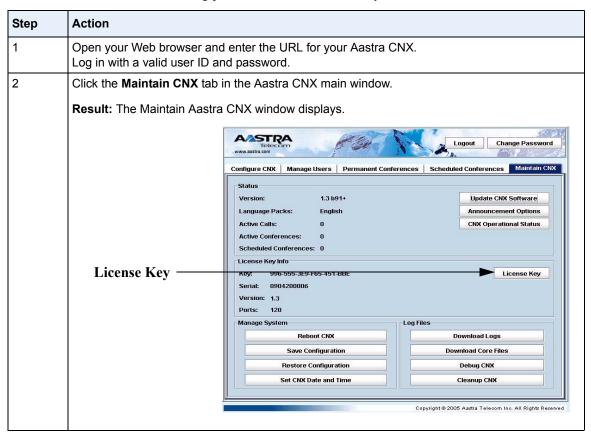
The **Maintain CNX** tab also provides a **License Key** tool for editing the license key when required.

You must enter a new license key for:

- Port upgrades (upgrading 30-port unit to 60-port unit or a 120-port unit)
- Major software releases (You must enter a license key to activate the software after the update is complete.)

## **Procedure**

Use the following procedure to edit license key information on the Aastra CNX.



Step	Action
3	Click License Key · Result: The License Key window displays.
	Please enter a new license key.  Apply Cancel
	<b>Note:</b> For port upgrades and major software releases, you must enter a new license key to activate the Aastra CNX software.
4	Enter the new license key you received with the port upgrade or major software release and click Apply.  Result: The Aastra CNX software activates and is ready for use.

# **Rebooting the Aastra CNX**

# **Description**

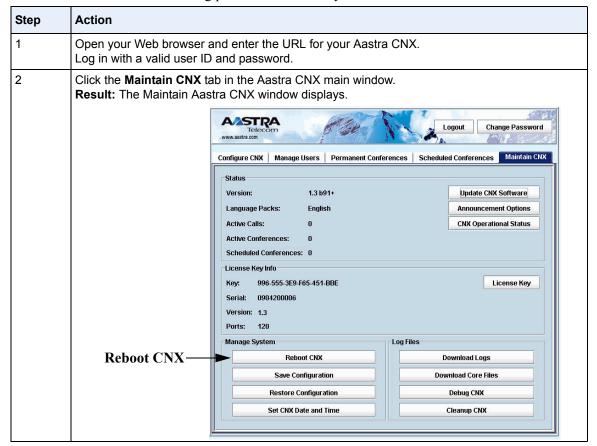
This section describes how you can reboot the Aastra CNX unit for maintenance purposes if required.

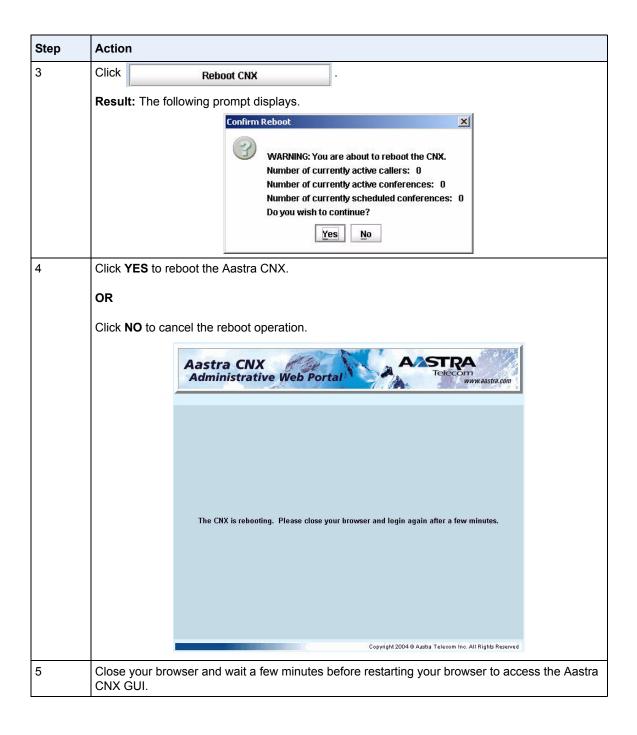


**Caution:** Rebooting the Aastra CNX causes interruption in the service that the unit is providing. Aastra Telecom recommends that you only reboot the Aastra CNX when required.

## **Procedure**

Use the following procedure to reboot your Aastra CNX unit.





# Saving/Restoring Configuration

# **Description**

The Aastra CNX GUI provides both a **Save Configuration** and **Restore Configuration** tool. These tools save and/or restore:

- Software configuration
- User information
- Permanent and scheduled conferences

When using the Save Configuration tool, the Aastra CNX creates a compressed file that contains all of the Aastra CNX configuration, user, and conference information, and stores that file to the directory path you specify. You can use the Restore Configuration tool to unpack this compressed file back to your Aastra CNX when required.

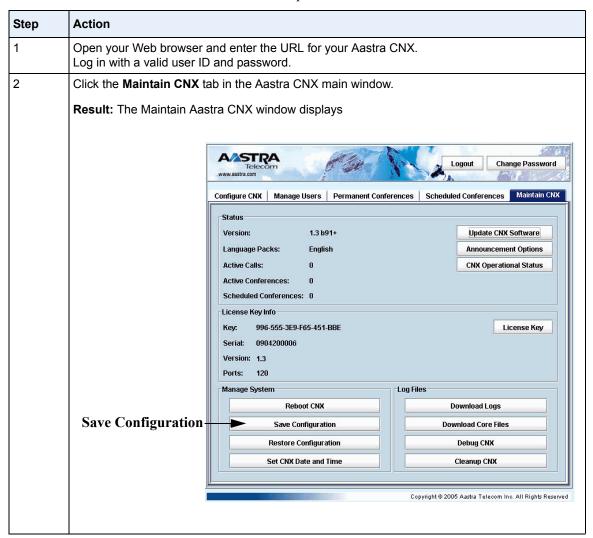


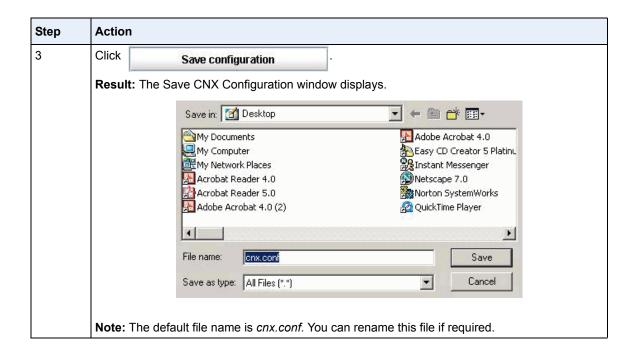
**Warning:** Restoring a previous Aastra CNX configuration file overwrites your current configuration, user, and conference information.

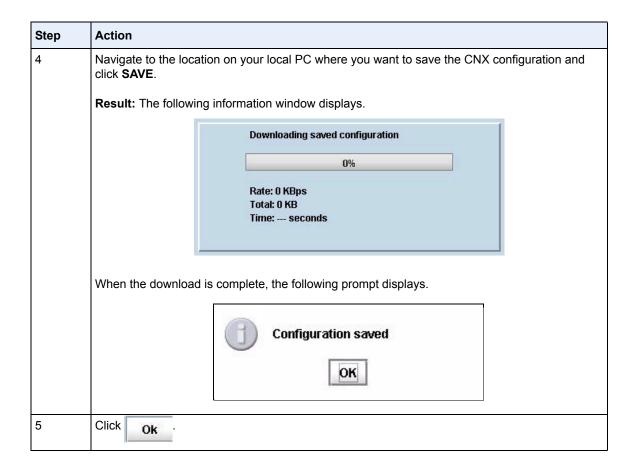
#### **Procedure**

#### Saving a configuration

Use the following procedure to save the Aastra CNX configuration, user, and conference information to a compressed file.





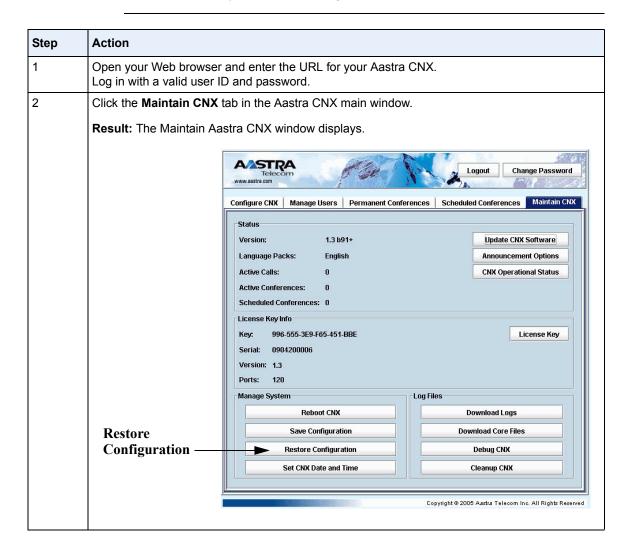


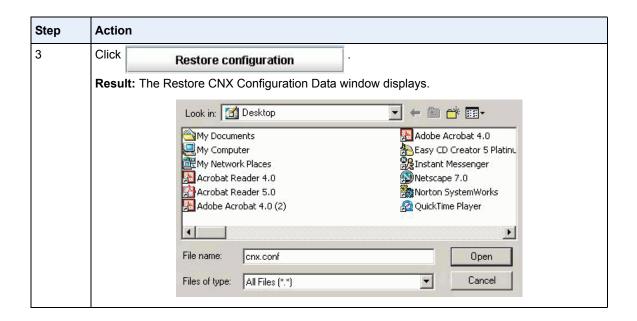
#### Restoring a configuration

Use the following procedure to restore the Aastra CNX configuration, user, and conference information.



**Warning:** Restoring a previous Aastra CNX configuration file will overwrite your current configuration, user, and conference information.





Step	Action				
4	Navigate to the location on your local PC where a previous version of the Aastra CNX configuration file is stored and click <b>OPEN</b> .				
	Result: The following information window displays.				
	Uploading saved configuration				
	Rate: 0 KBps Total: 0 KB Time: seconds				
	When the download is complete, the following prompt displays.  • Confirm Reboot				
	Please reboot for settings to take effect  WARNING: You are about to reboot the CNX.  Number of currently active callers: 0  Number of currently active conferences: 0  Number of currently scheduled conferences: 0  Do you wish to continue?				
5	Click <b>YES</b> to reboot your Aastra CNX and restore the configuration;				
	OR				
	Click <b>NO</b> to cancel the restore operation.				

# Setting date and time

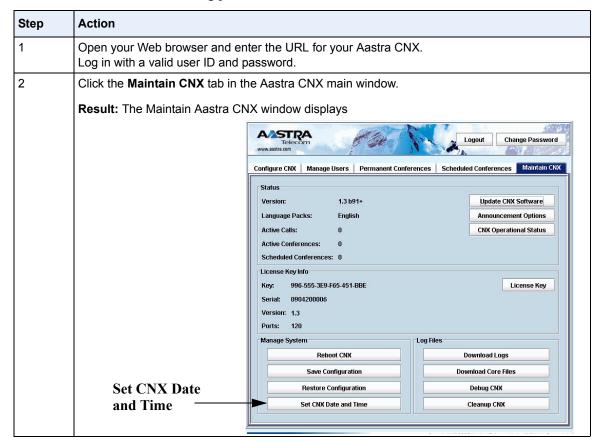
# **Description**

During initial configuration of the Aastra CNX (see Chapter 3, "Configuring the Aastra CNX") the date and time is set in the setup script. Using the Set CNX Date and Time tool, this date and time configuration displays as the default in the Aastra CNX GUI. You can change the date and time as required by clicking the Set CNX Date and Time button.

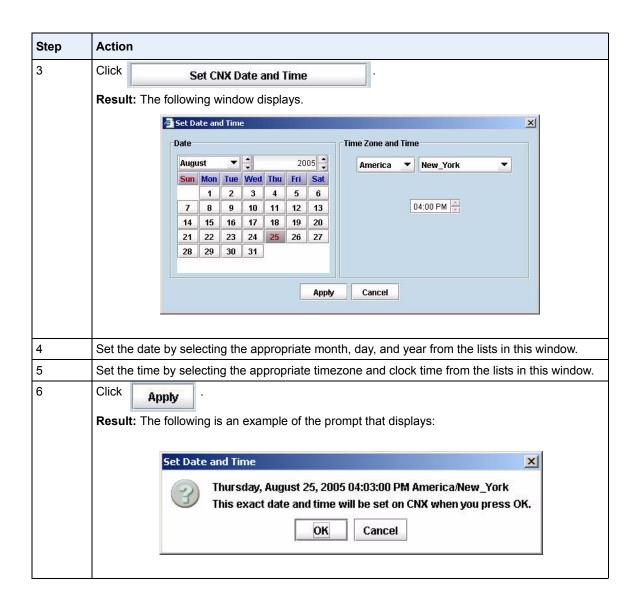
#### **Procedure**

#### Setting the date and time

Use the following procedure to set the date and time on the Aastra CNX.



#### Setting date and time



Step	Action				
7	Click <b>OK</b> to accept the date and time changes.				
	Result: The following message displays:				
	Success				
	The new date and time is now set on CNX.				
	OK				
8	Click <b>OK</b> to return to the <b>Maintain CNX</b> window.				

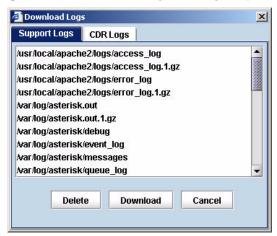
# **Downloading logs**

# **Description**

This section describes the call detail record (CDR) logs generated by the Aastra CNX. It also provides a procedure for downloading CDR logs to your local PC.



**Note:** The **Download Logs** window displays a "**Support Logs**" tab and a "**CDR Logs**" tab. The **Support Logs** maintenance is for Technical Support use *only*. Therefore, this section of the guide describes CDR logs, and provides a procedure for maintaining CDR logs *only*.



# What are CDR logs?

Call detail record (CDR) logs are files that the Aastra CNX automatically generates during call activity (ISDN, H.323, and SIP), and during conference activity of an active 24 hour period and when the Aastra CNX starts up.

The Aastra CNX maintains an open record until the call or conference activity is over. When the call or conference activity has ended, the Aastra CNX appends a footer to the bottom of the file, closes the file, and opens a new file.

You can use CDR log files for billing purposes and for debugging and troubleshooting the Aastra CNX as required.

There are two types of CDR logs:

- Call and conference activity CDR logs (cdrlog)
- Conference scheduling CDR logs (confcdrlog)

The CDR file names are in the following formats:

- cdrlog.<year>-<month>-<day>.<hour>.<minute>.<second>.csv
- confcdrlog.<year>-<month>-<day>.<hour>.<minute>.<second>.csv

The file names indicate the specific date/time period when the Aastra CNX generates the file. The time reference reflects the local time of the Aastra CNX using the 24-hour clock. The following are examples of CDR log names.



**Note:** For a detailed description about the contents of the CDR logs, see Appendix B, "Additional information about CDR logs."

# Example 1

The following example indicates an active call and conference activity, CDR log. The log was generated by the Aastra CNX on March 1, 2004 at 2:25 P.M. and 52 seconds.

cdrlog.2004-03-01.14.25.52.csv

## Example 2

The following example indicates an active conference scheduling CDR log. The log was generated by the Aastra CNX on March 20, 2004 at 1:20 P.M. and 34 seconds.

confcdrlog.2004-03-20.13.20.34.csv.gz



**Note:** The "csv" appendix indicates a comma separated value file. If the CDR log file name has a ".gz" indication, the log file is considered to be a compressed file.

# **Downloading/deleting CDR logs**

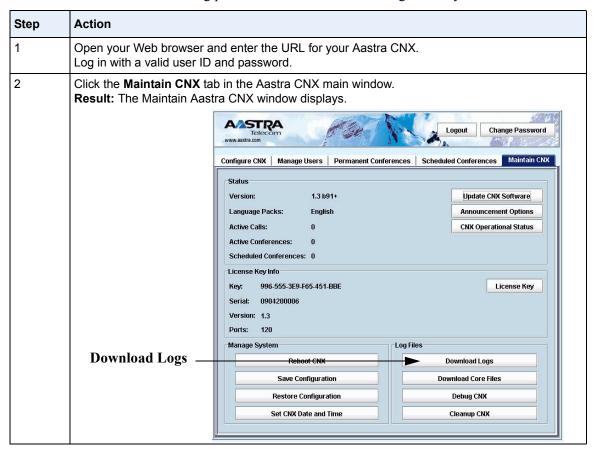
You can download *cdrlog* and/or *confcdrlog* file(s) to your local PC for viewing using the **Download CDR Logs** tool on the **Maintain CNX** tab in the Aastra CNX GUI. You can also delete the log files as required.

The following procedure provides information about how to download or delete CDR logs from the Aastra CNX.

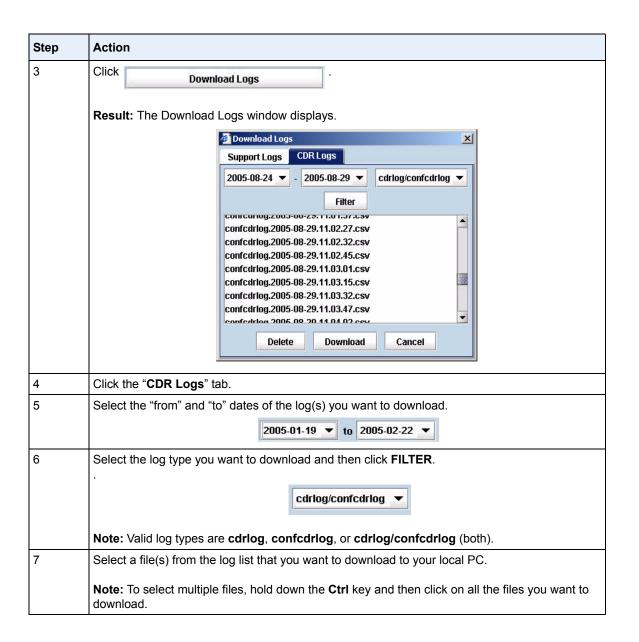
#### **Procedures**

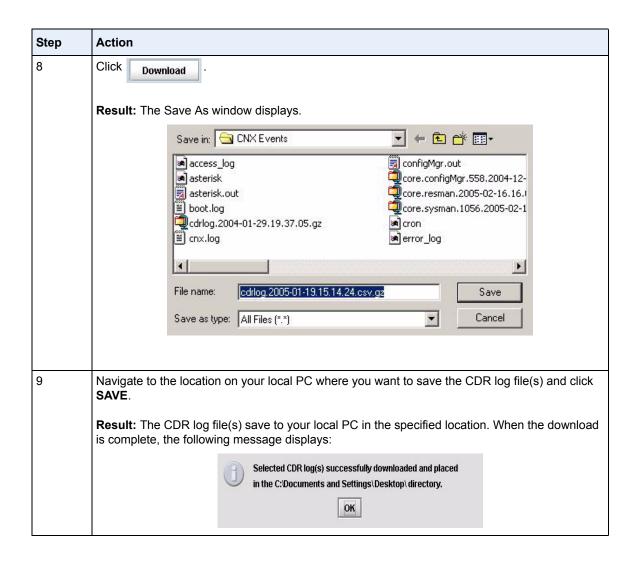
## **Download CDR logs**

Use the following procedure to download CDR log files to your local PC.



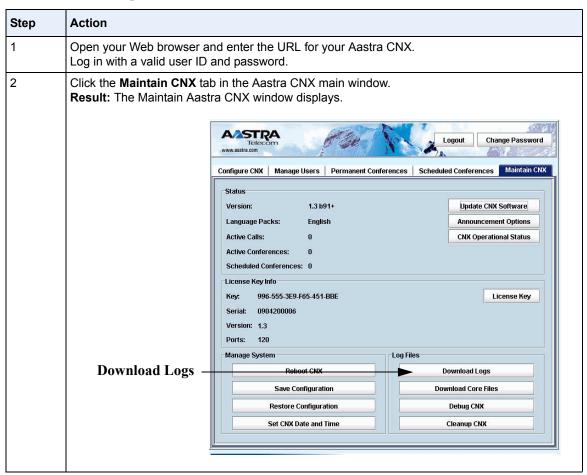
#### **Downloading logs**

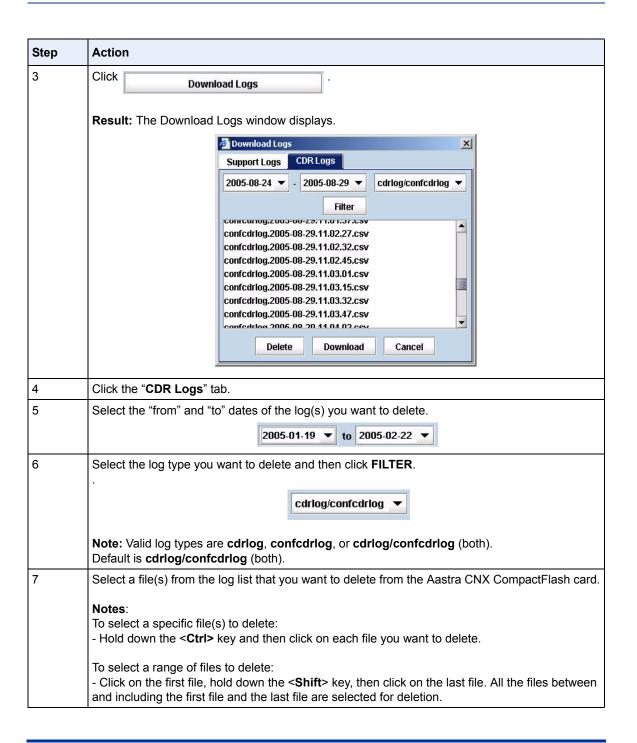




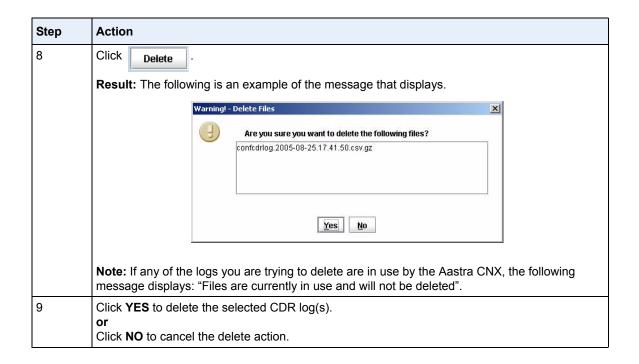
#### **Delete CDR logs**

Use the following procedure to delete a CDR log file(s) from the Aastra CNX CompactFlash card.





#### **Downloading logs**





**Note:** The **Download Core Files** and **Debug CNX** buttons are not described in this guide. They are for Technical Support's troubleshooting purposes *only*.

# **Cleaning up the Aastra CNX**

# **Description**

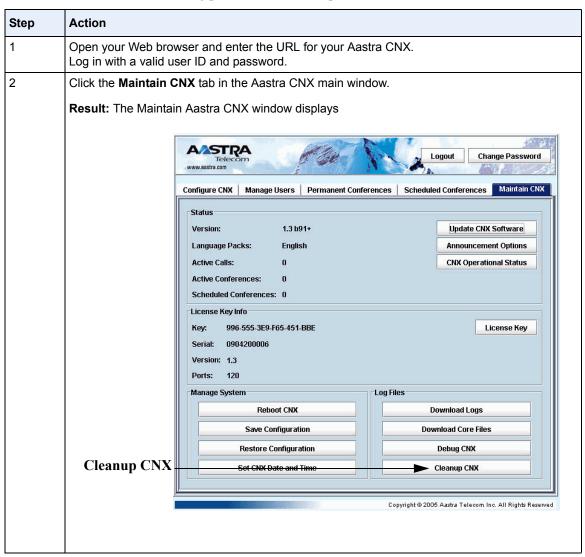
The Aastra CNX generates logs and events that are stored on the Compactflash. Significant amounts of extraneous files can fill up required space preventing any more files from being stored. A full Compactflash can also prevent you from upgrading the Aastra CNX.

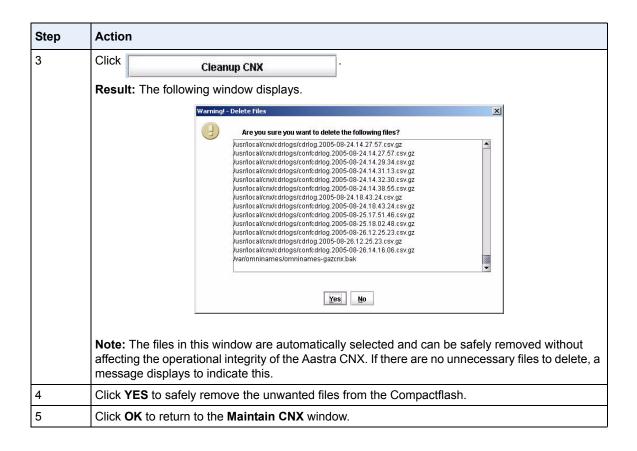
You can safely delete unwanted files using the **Cleanup CNX** tool in the **Maintain CNX** window. Some of the files you can delete include:

- /tmp/\*
- /var/log/\*.gz
- /var/log/asterisk/debug
- /usr/local/cnx/core/\*
- /usr/local/apache2/logs/\*.gz,
- /usr/local/cnx/cdrlogs/\*.gz
- /var/omninames/\*.bak, /var/spool/mqueue/\*
- /var/spool/clientmqueue/\*

#### **Procedure**

Use the following procedure to clean up the files on the Aastra CNX.





# Appendix A Conference key options

# Participant and Moderator key options

# **Description**

This section provides a quick reference list of the participant and moderator key options you can use after successfully joining a conference on the Aastra CNX.

## Participant key options

The following table lists the participant key options.

Function	Press key
Mute/Unmute	*1
Roll Call List*	*2
Go to first page in list	1
Go to previous page in list	2
Repeat current page in list	3
Go to next page in list	4
Exit list	#
Help (repeats Roll Call options)	*

(continued)

Function	Press key
Conference Extension Request (Participant is allowed this option only in unmoderated conferences)	*3
Extend conference by 30-min	1
Cancel current request for 30-min extension	3
Cancel current request for 30-min extension	#
Help (repeats Conference Extension options)	*
Help (repeats Aastra CNX menu options)	**

<sup>\*</sup>Roll Call List holds up to 10 names on each page with each name assigned an ID number.

# **Moderator key options**

The following table lists the moderator key options.

Function	Press key	
Mute/Unmute	*1	
Roll Call List*	*2	
Go to first page in list	1	
Go to previous page in list	2	
Repeat current page in list	3	
Go to next page in list	4	
Mute participant from conference	5, <id number=""></id>	
Cancel	#	
Help	*	
Eject participant from conference	6, <id number=""></id>	
Cancel	#	
Help	*	
Assign moderator privileges	7, <id number=""></id>	
Cancel	#	
Help	*	

(continued)

Function	Press key
Exit list	#
Help (Repeats Roll Call options.)	*
Conference Extension Request (Participant is allowed this option only in unmoderated conferences.)	*3
Extend conference by 30-min	1
Cancel current request for 30-min extension	3
Cancel current request for 30-min extension	#
Help (Repeats Conference Extension options.)	*
Lecture Mode (Allows only moderators to speak.)	*4
Add Port(s) Request	*5, <number of="" ports#=""></number>
Cancel add port(s) request	#
Conference Status	*6
Lock/Unlock Conference	*7
End Conference	*8
End the existing conference	1
Cancel request to end the conference	3 or #
Help (Repeats End Conference options.)	*
Help (Repeats Aastra CNX menu options.)	**

<sup>\*</sup>Roll Call List holds up to 10 names on each page with each name assigned an ID number.

# Appendix B Additional information about CDR logs

# **Description**

This appendix describes the call detail record (CDR) logs generated by the Aastra CNX. For a procedure on downloading CDR logs to your local PC, see Chapter 5, "Maintaining the Aastra CNX."

# What do the CDR logs contain?

The **cdrlog** files contain specific information about call activity and conference activity that occur on the Aastra CNX in a 24 hour period or when the Aastra CNX starts up. The **confcdrlog** file contains specific information about the conference scheduling activity that occurs when a user adds, modifies, or deletes conferences in the Aastra CNX GUI.

Every CDR log contains a Header Record. The Header Record is the first record in the CDR log file. When a CDR log is no longer active, the Aastra CNX generates a Footer Record in the log. The Footer Record is the last record in the CDR log file.

Each line in the CDR log represents a single record. A comma separates each parameter in the record. The second record in the CDR log is always the time the record was generated and the reason the record was generated. For a sample CDR log, see the following example.

## Example

The following example illustrates the contents of log file **cdrlog.2000-04-03.00.39.35.csv**. This cdrlog file has ended activity since it contains a footer.

```
954722375, HEADER, 1, RESTART

954722375, SYS_RESTART

954722385, CONF_ACT, 256

954726246, CONF_INACT, 257, 15912104

954727484, CONF_INACT, 256, 84

954803032, CONF_INACT, 258, 15913383

954806687, CONF_INACT, 256, 15913444

954808775, FOOTER
```

CDR logs can contain various types of records. The following table identifies the type of records that get stored in cdrlog and confedrlog files.

Record type	Found in cdrlog files	Found in confcdrlog files	Aastra CNX generates the record in a log	
HEADER	<b>&gt;</b>	<b>~</b>	for each new CDR log file.	
(Header Record)				
SYS_RESTART	<b>&gt;</b>	<b>&gt;</b>	each time a restart occurs. A completed record may contain any number of restart records.	
(Restart Record)				
SYS_SHUTDOWN	<b>~</b>	<b>&gt;</b>	each time a shutdown occurs.	
(Shutdown Record)				
FOOTER	<b>&gt;</b>	<b>~</b>	when it closes a CDR log file.	
(Footer Record)				

Record type	Found in cdrlog files	Found in confcdrlog files	Aastra CNX generates the record in a log		
CONF_ACT	<b>✓</b>	-	when a conference instance is scheduled. A CONF_ACT record includes:		
(Conference Active Record)			Conference ID (integer)		
			For permanent conferences, this record is generated when the conference is booked, since it becomes active immediately.		
			For scheduled conferences, this record is generated each time the conference is about to begin.		
CONF_INACT	<b>~</b>	-	when a conference instance is no longer scheduled. A CONF_INACT record includes:		
(Conference Inactive Record)			<ul> <li>Conference ID (integer)</li> <li>Duration of conference in minutes</li> </ul>		
CALL_START (Call Start Record)	~	-	when a user calls into the the Aastra CNX using call types of TDM, SIP, or H.323. A CALL_START record includes:		
			<ul> <li>Caller ID (integer)</li> <li>Conference ID (interger)</li> <li>Call type (TDM/SIP/H323)</li> <li>Caller (SIP/H323 address of the caller or the caller's phone number)</li> </ul>		

Record type	Found in cdrlog files	Found in confcdrlog files	Aastra CNX genera	ites the record in a log
CALL_END (Call End Record)	<b>✓</b>	-	from the Aastra CNX or H.323. A CALL_E  Caller ID Conference ID Call type Caller  Reason Duration in minu	nects a call or is disconnected (using call types of TDM, SIP, END record includes:  (integer) (interger) (TDM/SIP/H323) (SIP/H323 address of the caller or the caller's phone number) (Disconnect cause)* tes  could be any of the following:
			Disconnect cause	Description
			NORMAL	Normal call clearing (for example, a hang-up during a conference).
			SHUTDOWN	System was shutting down.
			NO_RESOURCES	All 30/60 ports in use.
			LOGIN_FAILED	Incorrect pin entered. This cause may log even if a user enters the wrong pin once, and then hangs up.
			NOT_STARTED	Attempted to log into a conference that has not yet started.
			NO_PORTS	All the reserved ports for the conference are in use.
			EJECTED	The moderator ejected the user off of the bridge.
			CONF_OVER	User is ejected from the conference because the conference time was up.
			INTERNAL_ERROR	An error condition on the CNX occurred; check the logs for error messages.
			UNKNOWN	Unknown error

Record type	Found in cdrlog files	Found in confcdrlog files	Aastra CNX generates the record in a log		
CONF_ADD (Conference Added	-	<b>&gt;</b>	when the user has added a conference to the Aastra CNX via the graphical user interface (GUI A CONF_ADD record includes:		
Record)			<ul><li>Exit status*</li><li>Conference</li></ul>	NOT_ENOUGH_PORTS, PORTS_IN_USE)	
			<b>Note:</b> *An exit status of OK means the conference was added successfully. All other values for exit status indicates an error occurred.		
			Conference Detail	Description	
			Name	Name of the conference	
			ID	ID of the conference	
			Туре	PERM (permanent) SCHED (scheduled)	
			Moderated	MODERATED NOTMODERATED	
			PIN	PIN for non-moderators of conference	
			Moderator PIN	Moderator's PIN (only if moderator exists for conference)	
			Ports	Number of ports allocated for the conference	
			Owner	User who created the conference	
			Start date	Start date/time of conference in format YYYY-MM-DD-HH-mm	
			End date	End date/time of conference in format YYYY-MM-DD-HH-mm	
			Duration	Length of time (duration) of the conference	
			Recurrence	NO_RECURR (no recurrence) DAILY WEEKLY MONTH_DAY MONTH_DOW (month and day of week) YEAR_DAY YEAR_DOWOM (year and day of week, week of month)	

Record type	Found in cdrlog files	Found in confcdrlog files	Aastra CNX generates the record in a log		
(Conference Modified Record)	-	<b>~</b>	when the user has modified an existing conference on the Aastra CNX via the graphical user interface (GUI). A CONF_MOD record includes:		
Woulded Necordy			Exit status*      (OK, DATA_INVALID, NOT_ENOUGH_PORTS, PORTS_IN_USE)     Old conference detail.     list on page B-5.     New conference See conference detail.		
			detail. list on page B-5.  Note: *An exit status of OK means the conference was modified successfully. All other values for exit status indicates an error occurred.		
CONF_DEL  (Conference Deleted Record)	-	<b>~</b>	when the user has deleted an existing conference on the Aastra CNX via the graphical user interface (GUI). A CONF_DEL record includes:		
inecolu)			Exit status*     (OK, DATA_INVALID, NOT_ENOUGH_PORTS, PORTS_IN_USE)     Conference detail     list on page B-5.		
			<b>Note:</b> *An exit status of OK means the conference was deleted successfully. All other values for existatus indicates an error occurred.		

The following are examples of the cdrlog and the confedrlog files.

#### Example 1

The following example illustrates the contents of log file **confcdrlog.2000-04-03.00.39.35.csv.** This log file has ended activity indicated by the FOOTER entry at the end of the file.

954722375, HEADER, 1, RESTART 954722375, SYS RESTART 954722385, CONF ADD, OK, test, 256, cnxadmin, PERM, NOTMODERATED, 60467, 2, 0-0-0-0-0, 0-0-0-0, 0, NO RE CURR, 954725463, CONF ADD, OK, HR Meeting, 257, admin, SCHED, NOTMODERATED, 23048, 5, 2004-10-5-13-30, 2004-10-5-15-30, 4, NO RECURR, 954726246, CONF MOD, NOT ENOUGH PORTS, HR Meeting, 257, admin, SCHED, NOTMODERATED, 23048, 5, 2004-10-5-13-30, 2004-10-5-15-30, 4, NO RECURR, , HR Meeting, 257, admin, SCHED, NOTMODERATED, 44444, 5, 2004-10-5-13-30, 2004-10-5-15-30, 4, YEAR DOWOM, 954726375, CONF ADD, DATA INVALID, HR Meeting, 256, admin, SCHED, NOTMODERATED, 828528456, 5, 2004-10-5-13-30, 2004-10-27-15-30, 4, DAILY, 954726496, CONF MOD, DATA INVALID, , 262151132, , SCHED, MODERATED, 262151132, 873267152, 0, 4000-61216-3999-7132-13325,61376-3986-0-9216-17442,4128,,,262151132,,SCHED,MODERATED,262151132,873267152 ,0,4000-61216-3999-7132-13325,61376-3986-0-9216-17442,4128, 954726706, CONF ADD, DATA INVALID, HR Meeting, 256, admin, SCHED, NOTMODERATED, 828528456, 5, 2004-10-5-13-30, 2004-10-5-15-30, 4, NO\_RECURR, 954727484, CONF DEL, OK, test, 256, cnxadmin, PERM, NOTMODERATED, 60467, 2, 0-0-0-0-0, 0-0-0-0-0, 0, NO RE CURR. 954741756, CONF ADD, DATA INVALID, test, 257, admin, SCHED, NOTMODERATED, 828528456, 2, 2005-10-1-17-0, 2014-10-1-17-30,1,DAILY, 954802093, CONF ADD, OK, HR Meeting, 258, admin, SCHED, NOTMODERATED, 828528456, 5, 2004-10-6-10-0, 2004-10-6-12-0, 4, NO RECURR, 954803032, CONF DEL, OK, HR Meeting, 258, admin, SCHED, NOTMODERATED, 828528456, 5, 2004-10-6-10-0, 2004-10-6-12-0, 4, NO RECURR, 954803554, CONF ADD, OK, HR Meeting, 259, admin, SCHED, MODERATED, 828528456, 828528456, 5, 2004-10-6-10-0, 2004-10-6-12-0, 4, NO RE 954806027, CONF ADD, OK, HR Meeting, 256, admin, SCHED, MODERATED, 828528456, 828528456, 5, 2004-10-6-11-0, 2004-10-6-13-0, 4, NO RE CURR. 954806687, CONF DEL, OK, HR Meeting, 256, admin, SCHED, MODERATED, 828528456, 828528456, 5, 2004-10-6-11-0, 2004-10-6-13-0, 4, NO RE CURR, 954806740, CONF ADD, DATA INVALID, General Meeting, 257, admin, SCHED, MODERATED, 830625608, 830625608, 5, 2004-10-6-11-0, 2004-10-6-13-0, 4, NO RE 954807002, CONF ADD, OK, General Meeting, 256, admin, SCHED, MODERATED, 828528456, 828528456, 5, 2004-10-6-11-0, 2004-10-6-13-0, 4, NO RE

954808775, FOOTER

#### Example 2

The following example illustrates the contents of log file **cdrlog.2004-09-03.13.16.57.csv**. This log file is still active.

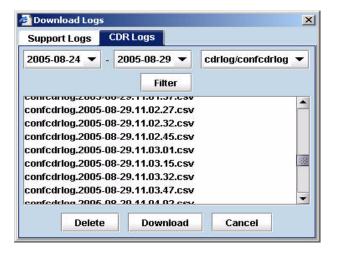
```
1094217417, HEADER, 1, RESTART
1094217417, SYS RESTART
1094217494, CONF ACT, 256
1094217508, CALL START, 1, 256, SIP, SIP/10.50.20.56-1015c980
1094217593, CALL START, 2, 0, SIP, SIP/10.50.10.51-10182e58
1094217593, CALL END, 2, 0, SIP, SIP/10.50.10.51-10182e58, LOGIN FAILED, 0
1094217713, CALL START, 3, 256, SIP, SIP/10.50.10.51-10182e58
1094217727, CALL END, 1, 256, SIP, SIP/10.50.20.56-1015c980, NORMAL, 3
1094217738, CONF ACT, 257
1094217829, CALL START, 4, 0, SIP, SIP/10.50.10.51-10177590
1094217829, CALL END, 4, 0, SIP, SIP/10.50.10.51-10177590, NORMAL, 0
1094217866, CALL START, 6, 257, SIP, SIP/10.50.20.56-1017d0b0
1094217986, CALL START, 5, 257, SIP, SIP/10.50.10.51-10184220
1094217986, CALL END, 5, 257, SIP, SIP/10.50.10.51-10184220, NORMAL, 0
1094218019, CALL START, 7, 0, SIP, SIP/10.50.10.51-101801c8
1094218019, CALL END, 7, 0, SIP, SIP/10.50.10.51-101801c8, CONF LOCKED, 0
1094218093, CALL START, 8, 0, SIP, SIP/10.50.10.51-101801c8
1094218093, CALL END, 8, 0, SIP, SIP/10.50.10.51-101801c8, NORMAL, 0
1094218105, CALL START, 9, 257, SIP, SIP/10.50.10.51-101801c8
1094218116, CALL END, 9, 257, SIP, SIP/10.50.10.51-101801c8, NORMAL, 0
1094218132, CONF_INACT, 257, 6
```

# Where are the CDR logs stored?

When CDR logs are generated, the Aastra CNX automatically stores the logs to the CompactFlash card for easy access and download when required. You can download these logs to your local PC using the log file tools on the **Maintain CNX** tab in the Aastra CNX GUI.

You can download a single CDR or multiple CDRs from the Aastra CNX CompactFlash card to your local PC. You can also delete single or multiple CDR logs as required.

The following illustration shows an example of CDR logs stored on the Aastra CNX.



## Reference

For a procedure on downloading CDR logs and core files, see Chapter 5, "Maintaining the Aastra CNX."

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# **Aastra CNX Conference Network Switch**

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